

BADGER STATE

Smoke Signals

For Radio Amateurs • By Radio Amateurs

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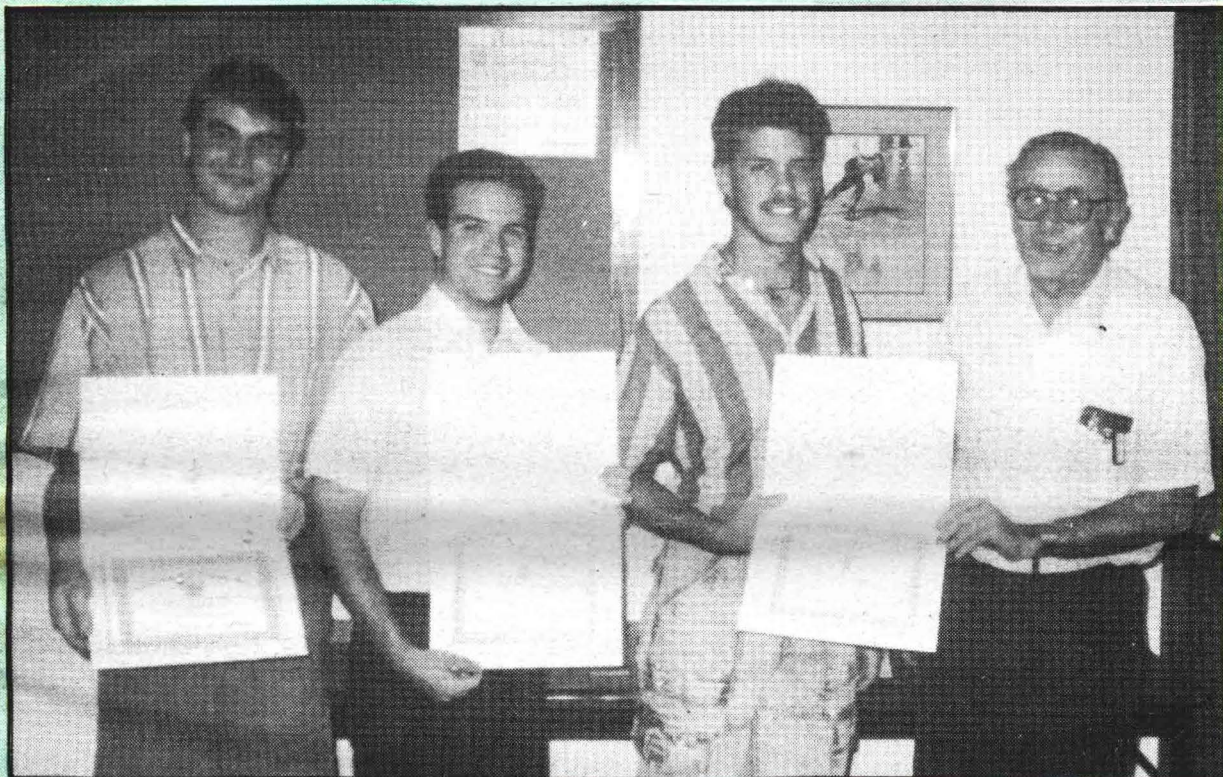
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Scholarship Winners



The winners of the West Allis Radio Amateur Club (WARAC) Memorial Scholarships for 1990 received certificates from WARAC President Ron Hooker, K9WTF (right), at a recent meeting. The recipients are, from left, Douglas Kleemann, KA9LWN, of Shawano; Martin Van Der Burgt, KA9MSR, of Kaukauna; and Chad Kurzewski, WE9V, of Greenfield. Recipients of the \$500 awards were selected by the Foundation for Amateur Radio (FAR) from qualifying Wisconsin applicants. The WARAC Memorial Scholarships are available exclusively to Wisconsin Amateurs holding a Technician Class or higher Amateur Radio license, and who are registered with a college, university, or technical school in the State of Wisconsin in a course leading to a bachelor or associate degree.

Photo courtesy Dave Knaus/WA9POV

League Readies for 220 Hearing

In preparation for its Nov. 16 day in court, the American Radio Relay League has filed a "Reply Brief for Petitioner" with the U.S. District Court of Appeals, D.C. Circuit, in the matter of awarding 220-222 MHz to commercial interests. "Now that respondents' (the FCC) brief has been filed, the most fundamental failings of the proceedings.... can be quickly capsuled," the League told the Court.

The Reply Brief asserted FCC has "from start to finish" wrongly assessed Amateur use of the 220-222 MHz segment (by incorrectly applying repeater use data to that segment); that FCC did not recognize the special needs of high-speed packet in the segment; and that the Commission reversed its policy of mandating increased efficiency in spectrum use without discussing the reasons.

"The Commission acted," the League's brief concluded, "arbitrarily and unreasonably in replacing the amateurs with land mobile users. The action of the FCC in reallocating spectrum rather than mandating increased efficiency for land mobile users demonstrates as much. The reallocation of the 220-222 MHz band should be set aside, and the matter remanded to the FCC."

- The ARRL Letter, 10/5/90

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ELMER



Swapfests and other Social Events

SUNDAY, NOVEMBER 4, 1990. Fox Cities ARC Hamfest at the Starlite Club, Rte. 1, Kaukauna, WI. For table reservations contact Don Baker, 621 W. 7th St., Kaukauna, WI. (414)766-3886).

SATURDAY, NOVEMBER 10, 1990. The Milwaukee Repeater Club sponsors the 6th annual "6.91 Friendly Fest" from 8:00 a.m. to 1:00 p.m. at Serb Hall, 51st & Oklahoma Ave., Milwaukee, WI. Selling halls are on the ground floor with easy access. On site Amateur radio exams. Tickets \$4.00. Table \$5.00 On-site Amateur Exams. Contact Milwaukee Repeater Club, P.O. Box 2132, Milwaukee, WI 53201.

SUNDAY NOVEMBER 11, 1990. Riverland Amateur Radio Club Hamfest and Shopping Spree, at the La Crosse Valley View Mall. Admission \$1.00, Tables \$2.00. (See ad elsewhere this issue for map and more details)

SUNDAY, DECEMBER 9, 1990. Winter Fest '90. Orland Park Civic Center, Orland Park, IL. Contact: GMRS of Illinois, Inc., 2077 Roosevelt Road, Wheaton, IL 60187. (708) 690-1492

SATURDAY, JANUARY 12, 1991. WARAC Midwinter Swapfest, Waukesha, WI. Contact: WARAC Swapfest, P.O. Box 1072, Milwaukee, WI 53201. (Watch for flyer ad with full details in BSSS)

SUNDAY, MARCH 24, 1991. Lamarsfest, Lake County Fairgrounds, Grayslake, IL. Contact LAMARS, Box 751, Libertyville, IL 60048. Commercial exhibitors call FRANK Avellone, W9GLO, (708) 295-6300.

SUNDAY, APRIL 7, 1991. MARA Swapfest, Madison WI.

SATURDAY, MAY, 11, 1991. Lakeshore

Swapfest, Manitowoc, WI.

SATURDAY, JULY 6, 1991. South Milwaukee Swapfest.

SUNDAY, OCTOBER 13, 1991. KMRA Swapfest, Waukesha, WI.

As a service to our readers, this section of Badger State Smoke Signals is available without charge to list your upcoming Swapfest, Hamfest, dinner, picnic, party or other event of interest to Radio Amateurs in Wisconsin and nearby areas.

Send information on your event to Kenneth A. Ebner, K9EN, 822 Wauona Trail, Portage, WI 53901. In addition, space is available at attractive rates on our advertising pages. For information on rates and requirements for our advertising pages, please contact K9ZZ or K9EN.

Club Meetings

Due to space limitations, we cannot always carry the full listing of Wisconsin and area club meetings. Please see the September 1990 BSSS meetings column for the latest complete listing. The following are additions or changes since that listing.

WAUPACA AMATEUR RADIO CLUB

First Saturday in March, June, September and December, at 9:30 a.m. at the Waupaca Fire Station in downtown Waupaca.

"CQ First Tuesday" - A social gathering and dutch treat luncheon at the King's Table in King, WI, on Highway QQ just south of highways 10 and 54 on the west side of Waupaca.

Based on current FCC statistics, a new ham is licensed in the United States once every 11 minutes, and hams upgrade at the rate of one every 10 1/2 minutes.

-- QST October, 1990

The TEST POINT

The following are known locations where Amateur Radio license examinations are scheduled in the Badger State area. (Underlined are added or changed since last months BSSS.)

November 3, 1990	Menomonie, WI
November 4, 1990	Kaukauna, WI
November 7, 1990	Milwaukee, WI (MRAC)
<u>November 10, 1990</u>	<u>Milwaukee, WI</u>
<u>6.91 Friendly Fest.)</u>	
November 17, 1990	Milwaukee, WI (BE)
December 1, 1990	Stevens Point, WI
December 5, 1990	Milwaukee, WI (MRAC)
December 8, 1990	Dubuque, IA
December 13, 1990	Marshfield, WI
December 15, 1990	Marshfield, WI
December 15, 1990	Milwaukee, WI (BE)
<u>January 21, 1991</u>	<u>Waukesha, WI (MRAC)</u>
Monthly, First Sat.	Racine, WI
(except January, July & August)	
Monthly, Last Sat.	Tomahawk, WI
(January thru October only)	
Monthly, Third Sat.	Loves Park, IL
Minnesota tests listed at end of column	

GENERAL RULES FOR MOST EXAMINATIONS:

Be sure to check with sponsors in the event there are changes and/or errors in the dates or information given.

Most examinations require filing an FCC Form 610 and advance registration at least 30 days before the exam date. (Some VECs permit walk-ins. Check with sponsor.)

To register, you must first secure a copy of the current FCC Form 610 and fill it out completely (AND CORRECTLY). Get your form from an FCC Field Office, the ARRL or Badger State Smoke Signals. Send a 25¢ SASE if you request one from the ARRL or BSSS. In most cases, forms can also be obtained from the sponsoring group.

ARRL/VEC examinations require a check for \$4.95 payable to "ARRL/VEC".

The FCC now requires applicants to show their original Amateur license to the VEC. A copy of your license must be attached to your FCC form 610. You will also be required to have a photo ID, or other acceptable identification.

Technician class licensees must show proof of testing before March 21, 1987, in order to upgrade to General with a code test only.

Additional information is given below.

MILWAUKEE RADIO AMATEURS' CLUB - MRAC/VEC

1990 examination dates: Nov. 7, Dec. 5.

1991 examination dates: Jan. 21. WARAC Midwinter Swapfest, Waukesha, WI. (Exams at Red Carpet Lanes across street from Expo Center.)

Tests (except Jan. 21) are Wednesday evenings at 7:00 p.m. at Wauwatosa East High School, North 74th and Milwaukee Avenue. Enter through the southmost entrance on 74th Street. Go to room 256 on the 2nd floor. Please arrive promptly, so testing can be completed before 10:00 p.m. Bring along your original license and two (2) good quality photocopies, plus two forms of identification, such as a driver's license, etc. Also required are a pen and \$4.75 for the exam fee. WALKINS are welcome. To register in advance, use a 15 cent U.S. post card: print the grade of

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ADDRESS CHANGES AND CORRECTIONS should be sent to Kenneth A. Ebner, address above.

EDITORIAL MATERIAL, PHOTOGRAPHS, FEATURE ARTICLES, AND EXCHANGE PAPERS should be sent to Jim Romelfanger, address above.

DISPLAY ADS or INQUIRIES REGARDING DISPLAY ADS may be directed to Harry Westlund or Kenneth Ebner, addresses above.

SUBSCRIPTIONS should be sent, with check or money order (do not send cash), to Jim Decker, address above.

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1 year	(12 issues)	\$8.50
2 years	(24 issues)	\$16.00
3 years	(36 issues)	\$23.00

license you are applying for, and your name, address, and telephone number. Send the card to MRAC/VEC, c/o Jack Krause, W9JK, 1737 North 116th Street, Wauwatosa, WI 53226, or to Ed Sergua, KE9JJ, 3840 South 43rd Street #21, Milwaukee, WI 53220. Telephones: (414) 774-6999 or (414) 545-6299.

BADGER EXAMINERS (BE) - MILWAUKEE
Nov. 17, & Dec. 15.

Unless otherwise noted, examinations are administered beginning at 1:00 p.m. to 3:30 p.m. at St. Nicholas Church basement, 5345 N. Green Bay Ave. (2 1/2 blocks south of Silver Spring), Milwaukee. Walkins are welcome. To register in advance, send a post card with your name, test or tests you wish to take, date you wish to take., your call sign, address and telephone number to Badger Examiners, Gary J. Sharbuno, WI9M, 5119 W. Willow Rd., Brown Deer, WI 53223. Telephone (414) 355-0237.

MENOMONIE, WI (ARRL-VEC)

November 3, 1990

Credit Union Bldg., 444 S. Broadway, Menomonie, WI. Contact: Dr. T. King, WF9I, 4817 Sierra Dr, Eau Claire, 54701, (715) 834 7777, 836-3980 (w)

KAUKAUNA, WISCONSIN

Nov. 4, 1990

Exams are given by the Fox Cities ARC, at the Starlite Club, Junction of CC and 55, Kaukauna, WI. Contact: Larry, KD9IA at (414) 788-3823 for more info.

STEVENS POINT, WISCONSIN

December 1, 1990

Blue Top Supper Club at south edge of the city on Business 51. Contact: Joe Larson, N9JW, 644 Portage St., Stevens Point, WI 54481. (715) 344-1182.

MARSHFIELD, WISCONSIN

Dec. 13, 7:00 p.m. - Dec. 15, 9:00 a.m.

Exams are given by the Marshfield Area Amateur Radio Society, at St. Joseph Hospital, St. Joseph Ave., Marshfield, WI. Contact Bob Mc Daniels, WA9K, 904 W. Blodgett St., Marshfield, WI 54449 (715) 389-2256

RACINE, WISCONSIN - ARRL/VEC

Monthly - first Saturday, except January, July, and August.

Exams are given at 9:00 a.m. at the Red Cross Building, 4521 Taylor Avenue, Racine. Walkins are permitted. Inquiries and registrations should be directed to William Firchow, Jr., NW9P, 1912 27th Street, Kenosha, WI 53140, telephone (414) 658-8390.

Tomahawk, WI

Last Saturday of every month. Jan. thru Oct.

Tomahawk Volunteer Examiners (ARRL/VEC). Tomahawk, WI. No pre-registration required, but appointment would be appreciated. Registration at 8:30 a.m. and testings starts at 9:00 a.m. For location or other information, inquire on 145.43 MHz. repeater or contact: Greg Garner,

WA9W, 4088 Highway 51, Harshaw, WI 54529. Telephone (715) 453-7096.

DUBUQUE, IOWA (ARRL/VEC)

December 8, 1990

Exams are at 9 a.m. in the Central Fire Station at 9th and Central in Dubuque. Use the basement entrance on 9th Street. Contact Mike Jozefowicz, NSOU, 2735 Hickory Hill, Dubuque, Iowa, telephone 319-582-8563. Talkins are on the 147.84/24 and 147.63/03 repeaters.

(Thanks Art Evans, KA9KLZ)

Loves Park, IL

Third Saturday of every month.

Northern Illinois Volunteer Examiners (DeVry VEC). Held at North Suburban District Library, 6340 North Second St. (Hwy. 251), Loves Park, IL. Contact: Dennis G. Eksten, W9SS, 5006 N. Second St., Loves Park, IL 61111. (815) 877-6768.

MINNESOTA TESTS

November 10, 1990 BARC
December 1, 1990 SPRC
December 8, 1990 BARC
December 15, 1990 SEMARC

Locations and contacts:

St. Paul Radio Club (SPRC)
St. Lukes School (cafeteria)
1065 Summit Ave.
St. Paul, MN
contact: Jay Bellows (612) 222-7253

Bloomington Amateur Radio Club (BARC)
Creskide Community Center
98th and Penn Ave. So.
Bloomington, MN
contact: Art Putt (612) 881-7181

SE Metro Area Radio Club (SEMARC)
St. Thomas Aquinas Activity Bldg.
920 Holly Ave.
St. Paul Park, MN
contact: David Harrell (612) 459-1647

The above Minnesota test are listed as a help to readers near or traveling thru the area. If you are interested in any of these, please save this listing as we may not always have space available to list them. Thanks to "Ground Wave" for the above information.

This section of Badger State Smoke Signals is available to publicize your Volunteer Examiner Amateur Radio license examination schedules.

Please send us your schedules of dates, times, and locations that you will be conducting examinations and we will include the information here. Be sure to include contact address and any other necessary requirements. Information should be sent to K9EN at the address shown on page 2.

FOR SALE: GAP Challenger DX-VI vertical antenna, new, \$175.00, OBO. Butternut HF5V-II vertical antenna, \$35.00, OBO. D. Winger, WS9G, (715) 447-8363.

W9VCL Silent Key !

Dr. Irvin Schroeder, "Doc" W9VCL of Plymouth, Wis passed away on Oct. 25, 1990 in Piemont, California while visiting his son and family. This is a great loss to the Sheboygan County Amateur Radio Club and all of Ham Radio. The Funeral services will be in Plymouth, Wis. on Oct. 30, 1990 Burial will be in Wisconsin Memorial Park in Milwaukee. WB9GLB - Kurt

WISCONSIN PACKETEER

(continued from page 18)

November '91. Also, it must be emphasized that if the cosmonauts wish, at any time they can pick up the microphone and call CQ. To obtain further information about AREM, please write to:

Wolf Hoeller (OE7FTJ)
Amraserstrasse 19
A-6020 Innsbruck
Austria

Simple Change Improves KAM on HF.....John - N1GMV

I recently bought a Kantronics KAM TNC and experienced unreliable HF connects with the unit. Contacts on HF remarked that my tones sounded wrong - too rough and splattery. Figuring that I had a ground loop or that I was overdriving the unit, I attached a oscilloscope to monitor wave forms. No problem there, so I changed the jumper K5 from the L0 setting to the HI setting to boost the AFSK output and checked for distortion. I noted no distortion on the scope as a result of the change, however, the output from the transceiver cleared up! After rechecking all possible variables within the KAM, I came to the conclusion that the problem resulted from too low an AFSK output being inserted into the transceiver, causing the transceiver's circuits to amplify the tones to an "acceptable" level for output, causing the distortion. As the KAM comes from the factory with K5 set in the L0 position, it would be a normal assumption that this should be the best setting. Also, this is not the case!

This manifestation appears in many brands and models of transceivers. Everyone that has switched K5 to the HI setting has remarked at the improved performance of the unit on HF with no negative effects on any of the KAM's other modes. The change requires 5 minutes to perform:

1. Remove all cables from the back of the KAM.
2. Remove the front panel. (Two Phillips screws)
3. Remove screw anchoring voltage regulator to KAM chassis.
4. Slide circuit board out front of chassis. Be careful to handle board by edges to reduce chance of static electricity damage.
5. Locate K5 near middle-right side of board.
6. Note position of shorting block on K5.
7. If in L0 position, pull shorting block straight up from board and reinstall it in the HI position.
8. Slide board back in chassis.
9. Reinstall voltage regulator screw.
10. Reinstall front panel.
11. Reinstall cables.
12. Power up the KAM and check the improved performance!

Wisconsin Nets Association Ltd.

Net Columns Edited and Written by the Net Managers

Wisconsin Nets

Net	WNA	Freq.	UTC	CST	Manager
BWN	Yes	3984	1200	0600	KC9CJ
BEN	Yes	3985	1800	1200	N9IAI
WSBN	Yes	3985	2330	1730	K9UTQ
WNN	Yes	3723	2400	1800	KA9FVX
WSSN	Yes	3645	0030	1830	N9BDL
WIN/E	Yes	3662	0100	1900	WB9ICH
WIN/L	Yes	3662	0400	2200	W9NGP
NWTN	Yes	34/94	0030	1830	NS9Q
6:30 Net	No	01/61	0030	1830	KA9OMC
Gr. Bay	No	72/12	0245	2045	WB9NRK

RACES No 3993.5 1815 1215 WC9AAG
USB Tues and Thu

RACES No 3993.5 1400 0800 WA90AY
LSB Sunday

W9KLN Appointed Cycle 3 and 4 9RN Manager



Bob Mayer, W9KLN, the new Net Manager for the Cycle 3 and 4 9RN nets, is pictured here - a CW operator - with his hand on a mike?? Read the story to find out why.

- Photo by
Les Peterson, W9YCV

By Les Peterson, W9YCV
9741 West Howard Avenue
Greenfield, WI 53228

Bob Mayer, W9KLN, is the new Net Manager for the CW 9RN nets (known as Cycle 3 and 4). On September 24th, he received a letter from Luck Hurder, Deputy Manager of Field Services for the American Radio Relay League, confirming the appointment. As Net Manager, he also becomes a member of the Central Area Staff. Bob has been the acting Net Manager, replacing Peggy Coulter, W9JUI, of Muncie, Indiana, who was recently elected Section Manager for Indiana.

Although a relative newcomer to amateur traffic nets, Bob is familiar with traffic handling, having been a CW operator with AACS for two years during WW II, and also a couple of years with Northwest Airlines after the war. Bob got his feet wet in amateur nets by participating in the Wisconsin Intrastate Net (WIN) and 9RN CW nets, but his goal was to become a member of the Transcontinental Corps (TCC). Currently, he holds the TCC function of Eastern Area Net receive (EAN/RX), which means he gets the traffic leaving the Central Area Net (CAN) for

EAN. Bob also performs various other functions, such as NCS and liaison for 9RN, in addition to the Net Manager duties.

Bob has spent some time in the broadcasting field, having worked for WTMJ (Milwaukee) for a while, and later becoming Chief Engineer at WFOX until he retired in 1980. He was first licensed as an amateur operator in 1940, and received his present call at that time.

As you can see in the accompanying photo, Bob has a well laid out station, consisting of a TS-930S and SB-221 for HF, and a TS-711A for two meters. He uses a full wave dipole on 80 meters, a vertical on 40 meters, and a 2 meter beam. With his IBM clone computer and a PK-232 terminal, he operates on packet and will be on AMTOR. (Note: The photo, with Bob's hand on a microphone instead of being on the paddles, was the photographer's choice, being a clearer picture.)

Bob is looking for more CW operators to act as liaison stations from Wisconsin nets to 9RN, as our participation has dropped into the 90 percent area. He also has a need for net controls and liaison stations in 9RN. How about supporting Bob and volunteering to fill in some of the empty slots? □

in Racine, NW9P; Blue Top Supper Club in Stevens Point, N9JW; then on December 5th, East High School in Milwaukee, W9JK; December 13th and 15th, St. Joseph Hospital in Marshfield, WA9K; finally, on December 15th at St. Nicholas Church in Milwaukee, WI9M.

The Wisconsin Valley RA moved their 444.1 MHz antenna to the 105 foot level on Rib Mountain's big tower.

Central Wisconsin Radio Amateurs, interested

in applying for Special Service Club, has new officers: Pres. KA9LAQ; V. Pres. KA9TTU; and Sec./Treas. KB9CRV. CWRA has nine husband and wife member couples that are licensed amateurs, can your club top that?

Season's Greetings. □

Wisconsin Nets Association news is continued on page 13.

Section Manager's

notes



Richard R. Regent, K9GDF
5003 South 26th Street
Milwaukee, WI 53221



Welcome to new Affiliated Club Coordinator (ACC) KE9XQ in La Crosse; special thanks to KA9FOZ for six years of work as past ACC.

KC9CJ, our STM, and family have moved to Port Edwards.

KA9DDN, with a little research, cut telephone costs for the Ozaukee RC repeater by 40 percent. Police Chief Meloy suddenly had problems with his police radios and couldn't communicate with his staff at an important event. The Ozaukee RC ARES (now with 46 members) saved the day, and impressed the Chief with their reliable Amateur Radio communications.

Congratulations to new officers of Wisconsin Nets Association: Chairman K9KSA; Sec. N9IAI; and Treas. KY9P.

New W/K ARC officers: Pres. NX9H; and Sec./Treas. KB9DRK.

Green Bay Mike and Key Club reports new local telephone Bulletin Board System has ham section, telephone (414) 337-9374.

Rock River RC fox hunt had first place winners WD9ADB, KA9JDE, and his son Cory.

W9NGP, NM of WIN/L, on 3.662 MHz at 10 p.m., could use a few more liaisons.

Watertown ARC Christmas Party will be at Donny's on December 2nd.

Exams on December 1st: Red Cross Building



HERE and THERE

HAMFEST SPONSORS: According to the ARRL's *Section Manager's Letter* of September 20, 1990: "Hamfest flyers mentioning prize drawings are being direct-mailed and are being included in club newsletters. **These violate postal regulations.** (Emphasis added.) It may be of service to your (Section's) clubs and event committees to draw their attention to postal regulations and refer questions to their postmaster."

- Thanks Rich Regent, K9GDF

FCC CHECKS CABLE SYSTEMS: Engineers of the Federal Communications Commission conducted field tests of cable television systems around the country the week of August 20, according to a Commission release. The stated purpose of the checks was to assess and improve compliance with a new Cumulative Leakage Index (CLI) that went into effect July 1.

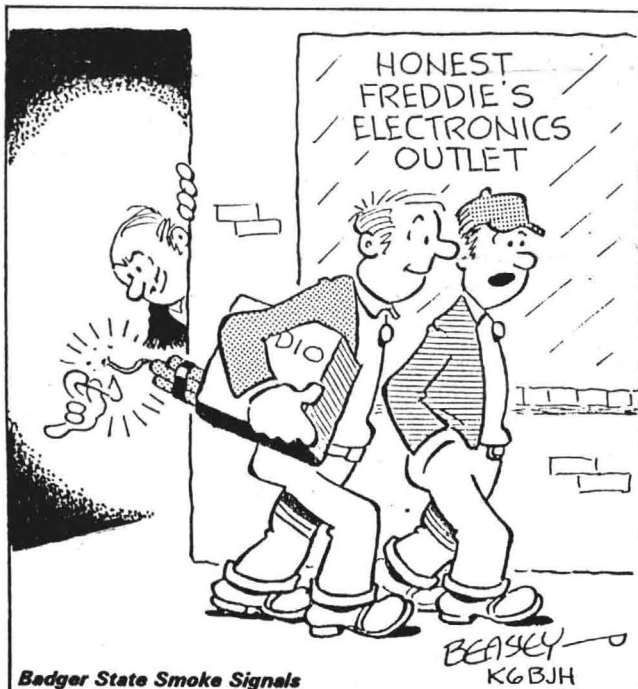
The CLI standard sets a leakage limit that cable operators must not exceed, in order not to cause harmful interference to aeronautical communications and navigation frequencies. Cable systems found not in compliance will be ordered to shut down operations in the aviation bands 108-137 MHz and 225-400 MHz, the Commission said.

If a cable leaks (signals) out, it leaks (signals) in as well. Amateurs operating on the 2-meter band can be affected (most cable TV systems put Channel 18 within our 2-meter band), as are those operating on 220 MHz.

Cable system licensees are required to provide documentation of compliance to the FCC, and all systems are subject to on-site evaluation by Commission personnel.

Results of the tests are not yet available.

- The ARRL Letter, 9/7/90



Badger State Smoke Signals

THAT WAS A CHEAP RADIO -- ARE YOU SURE THE WARRANTY EXTENDS BEYOND FREDDIE'S FRONT DOOR?

HE'S NOT A SILENT KEY! In our story two issues back about Amateur Radio aboard the Great Circus Train, we told you that Dick Oberholtzer, W9ZPV, is a Silent Key. We've since been told that's not true. Sorry about the error, Dick! This is one of those rare times when it's *good* to be wrong.

PHOTO CREDIT CORRECTION: In the story about the Tomah flood, published in the October issue of *Badger State Smoke Signals*, we incorrectly credited the photo to Bill Bastian, N9BOE. Bill **did** send the photo to us, but it was taken by John Froelich, of Tomah Newspapers. We apologize for the error, and we thank John for the photo.

SCOTT L. YOUNG, N9FZS, was selected by the ARRL Foundation to receive the \$500 Edmond A. Metzger Scholarship, according to the 10/19/90 issue of *The ARRL Letter*. Scott is attending the Milwaukee School of Engineering. The scholarship is funded by Central Division Director Ed Metzger, W9PRN. Congrats, Scott!

NEW CALL SIGNS FROM GETTYSBURG: Here are the latest Amateur Radio call signs issued by the FCC, as of the first of October:

Area	Extra	Adv.	Tec/Gen	Novice
0	AA0BZ	KF0MW	N0MLS	KB0HOR
1	WK1F	KC1WY	N1IAV	KA1WLE
2	AA2BI	KE2WH	N2LGM	KB2LEZ
3	WE3T	KD3TW	N3IOB	KA3WXD
4	AB4ZC	KN4PF		KC4TGW
5	AA5UU	KI5JP	N5RJM	KB5NUY
6	AA6YE	KK6QF		KC6ODO
7	AA7GI	KG7IS	N7PQH	KB7LRZ
8	AA8CG	KF8JJ	N8MXV	KB8KSH
9	WV9Q	KE9ZF	N9KDV	KB9FNS
HI		AH6KP	NH6XP	WH6CJC
AK		AL7MK	NL7UZ	WL7BZK

- The ARRL Letter, 10/19/90

HEADLINE CORRECTION: The headline above the photos on page 10 of our October issue should have read *Some of RMC's Best Hidden Transmitter Hunters*.

Fergie and Frances



Caught by the camera at the Fall meeting of the Quarter Century Wireless Association, Wisconsin Chapter 55, were Fergie (W9IEM) and Frances Ferguson of Pine River. More news and photos are on page 15 of this issue.

- Photo courtesy Ed Seruga/KE9JJ

FCC TO UPGRADE LAB; COMMERCIAL LICENSE VOLUNTEER EXAM SYSTEM ENABLED: A special subparagraph of the FCC authorization Act, signed Oct. 1, permits the Federal Communications Commission to spend up to \$2,000,000 to upgrade their laboratory in Laurel, Maryland.

The act also permits the Commission to establish a volunteer examiner system for commercial radio operator licenses and endorsements, allowing the examiners to recover from examinees "such fees as the Commission permits, considering such factors as public service and cost estimates submitted by such person."

- The ARRL Letter, 10/5/90

HALLOWEEN HUMOR: Three vampires went into a local bar. The bartender said to vampire #1, "What'll it be?" The vampire said, "I'll have a Blood." The bartender asked vampire #2, "What'll it be?" Vampire #2 responded, "I'll have a Blood." The bartender asked vampire #3, "What's yours?" Vampire #3 said, "I'll have a Plasma." "OK," said the bartender, "That's two Bloods and a Blood Light."

- Tom, KA4P

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☐ 1 year ☐ 2 years ☐ 3 years

☐ new ☐ renewal

Solar Cycle 22: How Much Longer?

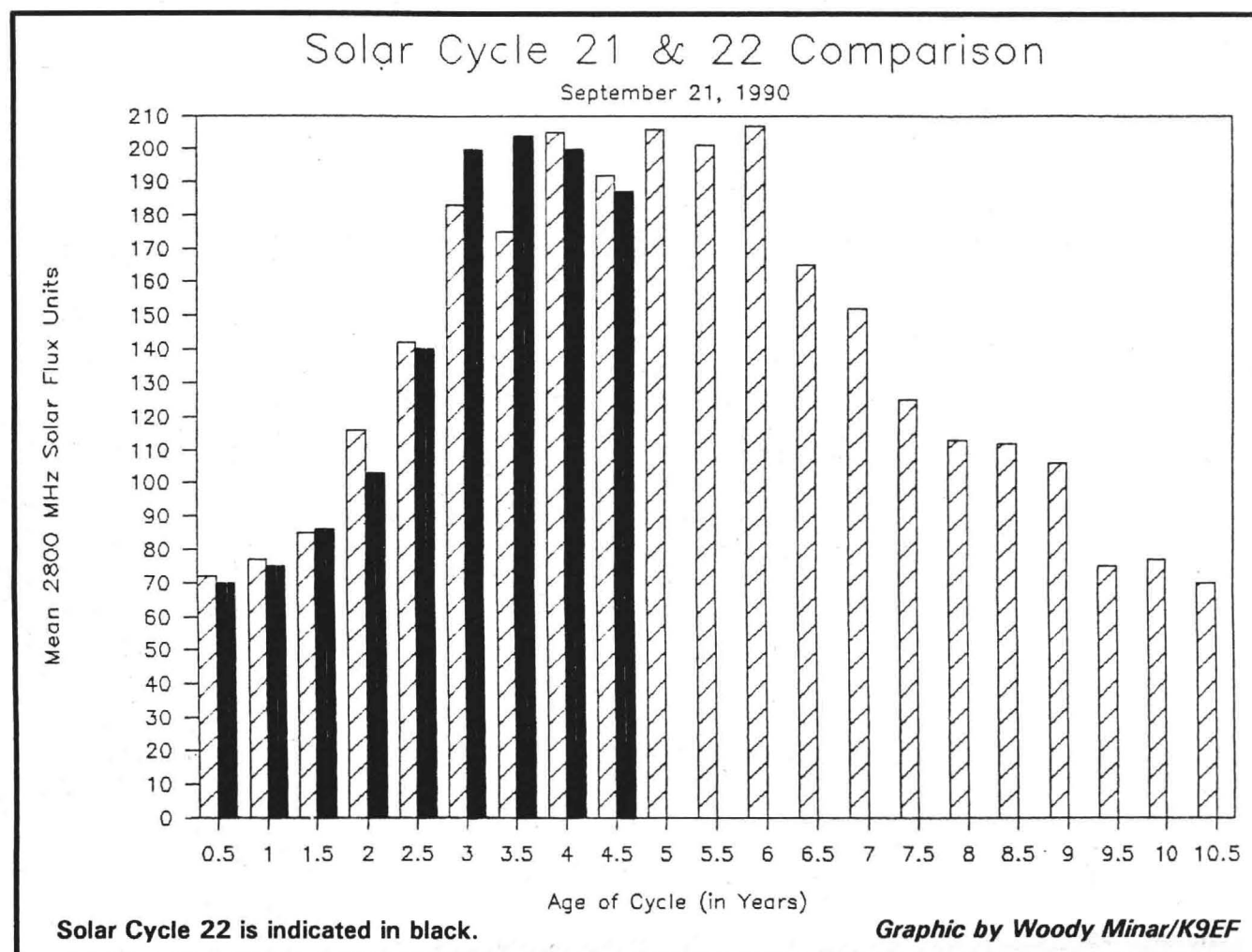
By Woody Minar, K9EF
13508 Tabscott Drive
Chantilly, VA 22021

Are we pessimistic or worried that Solar Cycle 22 is almost over? Could it be like summer - we wait for it to arrive and before we know it, it's autumn? Before I answer that, a review of one key measurement will be helpful.

Daily Solar Flux Units (sfu) are derived from observations of the 2800 MHz radio emissions originated from the solar disk and from any active regions. These observations are made at the Algonquin Radio Observatory (ARO) in Ottawa, Canada. Generally, they range severely from about 65 sfu to beyond 300 sfu, depending on season, sunspot cycle strength and age, and solar activity.

While most solar cycle comparisons use sunspot numbers, I have found in my 16.5 years of record keeping that the 2800 MHz Solar Flux Unit and Ap Index (Planetary Alpha Index measuring geomagnetic activity at the middle latitudes), plotted together daily, is a more reliable tool to forecast good and bad propagation and cycle activity. When plotted on monthly, quarterly, seasonal (semiannual), and yearly scales, an accurate picture of the solar cycle can be seen. It is so accurate that one can nearly pick the actual day when one solar cycle ends and the other begins.

So, where do we stand with Cycle 22? Looking at the accompanying graph, and picturing the life of a solar cycle as a bell curve, one will see, with few exceptions, a new solar cycle has a 2 to 3 year rise time from its birth (low mean monthly sfu) to its first peak (high mean monthly sfu). For instance, Cycle 21 rose from first quarter 1976 (77 sfu) to first quarter 1979 (sfu=202). Then came a period of 3.5 to 4 years of excellent propagation, with six-month intervals of minor solar flux oscillations. For Cycle 21, these oscillations varied between 144-170 sfu and



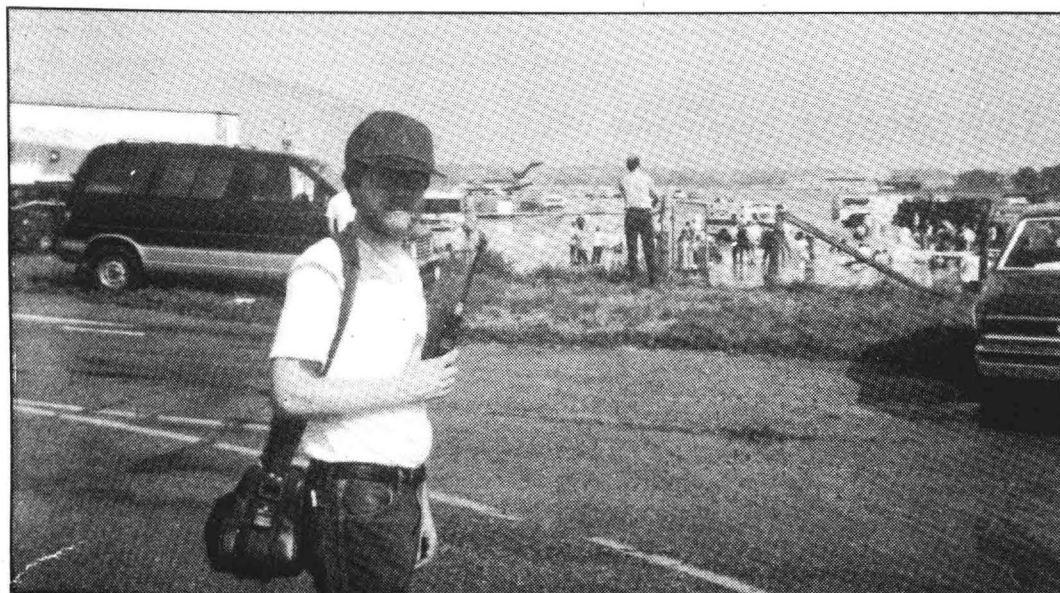
210-226 sfu. The decay of a solar cycle generally lasts from 4 to 4.5 years (December 1982 to September 1986 for Cycle 21).

Cycle 22 is no different. Its 2.5 year rise clearly began in September 1986, with a monthly mean of 68 sfu. The cycle rose to an initial mean monthly peak of 170 sfu in October 1988 before taking a slight dip to January 1989. Since then, the mean monthly solar flux is on its fifth oscillation, between about 170 sfu and 235 sfu. Cycle 22, then, is showing us the same characteristics as Cycle 21.

At this time (autumn 1990), we are smack

dab in the middle of the 3.5 to 4 year oscillation period. Hence, I can confidently say that in the autumn of 1992, the decay of Cycle 22 will commence. The good propagation we now experience will gradually decline for 4 to 4.5 years, until the winter of 1996-1997, at which time Cycle 22 will die and Cycle 23 will be born. Without a doubt, we will bring in the new century with the beginning of the peak of good propagation.

The accompanying graph plots Cycle 21 in its entirety, and Cycle 22 from conception to date, in six month seasonal intervals.



Triage on the Tarmac

On Thursday, September 6, a county-wide disaster drill was held in Dane County at Truax Field. The disaster was a simulated airplane crash. Members of the Four Lakes Amateur Radio Club and the Madison Area Repeater Association handled traffic for the American Red Cross, with operators at the Red Cross Headquarters building on Sheboygan Avenue and the airport.

Radio amateurs taking part in the drill were Carol Hoke, NS9L; Bob Wiggin, WK9V; Chris Rohrmeier, N9JKS; Tom Weeden, WJ9H; and Bob Aspinwall, KA9JPZ, pictured at the scene at left.

- Story and photo by Tom Weeden/WJ9H

Swapfest Review

By Richard R. Regent, K9GDF
5003 South 26th Street
Milwaukee, WI 53221

Milwaukee School of Engineering Amateur Radio Club Mini-Swapfest

It is a cold, drizzly, and cloudy Sunday morning, one of those days when many hams scurry home after church to watch TV football or take a nap. It is September 16th, the day for the Milwaukee School of Engineering Amateur Radio Club's mini-swapfest, held at a new location: 1025 North Milwaukee Street, in the auditorium of what was once part of a famous brewery. Being Sunday, there is plenty of free on-street and lot parking. The Fest flyer also gives the W9HHX school station address, 1025 North Broadway, so several folks go there first by mistake but are politely redirected by operators who are running the talk-in station to the auditorium a block northwest.

I arrive at 8 a.m., the scheduled opening time. The ticket table is staffed by helpful young women who take money, give out tickets, and offer everyone a free bag of snacks if they want one. I am pleasantly surprised to learn that the four dollar table cost includes admission. "Take whatever table you want," they remark. Entering the auditorium, I see there are still plenty of tables available, even those highly desirable tables around the perimeter of the room with electrical outlets.

The wall-to-wall carpeted auditorium is well lighted, stocked with plenty of yellow plastic chairs, and has neat rows of white wrapping paper covered tables. The public address system is a bit hard to understand, but welcomes visitors to tour W9HHX, and then echoes prize winning ticket numbers. WU9B wins four bottles of assorted Henri salad dressings and two bags of Snackers. Someone wins a T-shirt, and there are other prizes.

In an adjacent room, a volunteer examiner team handles several candidates who take amateur exams. Down the hall is a small cafeteria, with 55 cent coffee and three choices of doughnuts. Several groups of friends sit at round tables to relax and chat.

John Leekley, WB9SMM, Emergency Coordinator for Milwaukee, promotes ARES at two tables with his "portable" packet radio, using a Tandy 1400LT computer, Heath Pocket Packet, TH-21AT pocket transceiver, and Kodak printer. John describes the system to everyone, and answers many questions about his new database system. Three more volunteers sign up for the October 13 NDMS drill.

Sixteen of the 20 available tables are sold; three are used by MSOE ARC members. Club President (1987 ARRL Hiram Percy Maxim Award winner) Scott Young, N9FZS, says the mini-fest is being held to pay for some Club equipment, and admits that more publicity could have helped attendance. Some swap-goers heard of the Fest by "word of mouth," although flyers were available at Radio Recyclers, and a few found out just days before on local nets. One fellow laments, "There's not a whole lot to buy here", another mumbles, "I'm a little disappointed and thought about calling my friend to tell him not to come, but I won't." Unfortunately, the Fest was a well kept secret.

Scott optimistically estimates that 300 people will attend, but the room is nearly empty by 10 a.m., well before the 2 p.m. closing time. Those who attended had a fairly enjoyable get together with friends, put faces and calls on familiar voices, and got to see downtown Milwaukee when there wasn't a traffic jam. Scott promises to intensively promote their regular 1991 Swapfest in QST, the Smoke Signals, and elsewhere - well in advance to let everyone know, and to insure a great turnout.

Happy Thanksgiving

From the Badger State Smoke Signals Staff!

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From Our Readers

SAREX - Hardly a Cluster Buster

It is amazing that we enjoy a hobby of communication and yet often have a failure to communicate with each other. Real damage can result if incorrect or incomplete information is presented to our ranks through Amateur Radio publications. At various times, it is done this way unintentionally by even our own mentors - the Extra Class hams. Recently, this was the case within this publication regarding packet radio nodes and the space shuttle - the alleged "Cluster Buster".

Since the SAREX shuttle mission is yet upcoming, I still have an opportunity to present the facts that were omitted in a previous guest's comments. With this added information, you can now form an educated opinion on the space Shuttle Amateur Radio Experiment - SAREX, and its interference potential to packet clusters.

First, let's review the conditions that are both common to packet nodes as well as shuttle operations. In both cases, we are using VHF frequencies, not "skip" conditions like we find on our HF bands. The communications with adjacent packet nodes, as well as the shuttle, require a line-of-sight condition. Thus, VHF QSOs are more dependent on the terrain between stations than the antenna, power level, or the equipment used. However, for space communications, there is no terrain to block our signals if the shuttle is above our view of the horizon.

A key point was unfortunately missed by the author of "Cluster Buster" - the shuttle is constantly moving relative to our QTH. While this may be an obvious condition, it completely changes the entire situation. In operation, the

shuttle will rise above our horizon for possible QSOs and then, only a few minutes later, set below our horizon for an immediate QRT or packet disconnect. There is absolutely no value in a packet station attempting to connect to the shuttle if the shuttle is not above the horizon. The focus of packet cluster sysops' complaints should be directed at how long the shuttle is above their cluster's horizon, since that is the only time the potential will exist for packet interference.

The figures presented here do not require you to be a rocket scientist to understand. Anyone with a personal computer, from a Commodore VIC-20 to an IBM 386 or a Macintosh, can make the same calculations. AMSAT, the Amateur Satellite Corporation, is an excellent source of satellite tracking software for most home computers, if you are interested in confirming my results. The following data is listed in three groupings. First is general orbital information, next is the mission schedule data, and finally, the results of the shuttle's orbit and how much potential packet cluster interference can be expected.

Orbital Information

Two figures determine the path that the shuttle will take and what size the "footprint" is. The "footprint" is the area of the earth that the shuttle can see or QSO; remember, it is line of sight. The SAREX mission will circle our globe at an altitude of between 202 and 211 statute miles. This is a low orbit by satellite standards, and it results in a small footprint that is constantly moving over the earth's surface. An orbital parameter, known as inclination, will be 28.5 degrees. This is the angle that the path of the satellite will make with respect to the equator. What's even more notable is that 28.5 degrees represents the furthest North and South latitudes that the shuttle will ever reach, where it can appear directly overhead. This latitude, in our country, corresponds approximately to Orlando, Florida.

Mission Schedule

The mission itself is over eight days long - 207 hours, to be exact. During these eight-plus days, there will be eight packet sessions dedicated to the robot packet operations. These will be the QSOs that cause the potential packet cluster interference. The eight sessions will range in length from 11 hours 15 minutes to 13 hours 35 minutes in duration, again all while the shuttle is changing its QTH. This is where the 12 hour figures come from which have appeared in previous articles. In the total 207 hour mission, 98 hours and 10 minutes are scheduled for the packet robot, or about 47% of the mission's length.

The Result

By combining the inclination angle, the altitude of the shuttle, and your latitude into a tracking program, one receives some surprising results. The only element we have control over is our latitude; that is, where we have our QTH. To illustrate the significance of latitude, I have the tracking results for various city latitudes in the chart at the end of this letter.

In a 207-hour-long mission, the shuttle will only be in the line of sight from Milwaukee for a total of 2 hours and 7 minutes (127 minutes), and never be in view for more than 7 consecutive minutes. Is this a tremendous "Cluster Buster"? How about a U.S. centralized city like Memphis? 5 hours and 31 minutes within the 207-hour period for this QTH. Severe QRM? - I think not. Even a worst case condition city like Orlando, with some passes traveling almost directly overhead, the passes will not exceed 11 minutes in length per orbit. The QRM amount looks minimal here, too, being less than 4% of the total mission length.

In summary, this situation with potential interference between packet shuttle operators and packet cluster nodes has received a lot of

Please turn to page 16

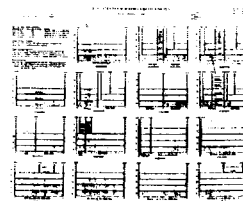
Canadian Sub-Bands Disappear

Don't be surprised to hear VE prefix stations operating phone or other modes in spectrum you never heard them in before. The deregulation of mode-sub-bands in Canada was not supposed to be implemented until next year; it was supposed to be held up at the Privy Council Office where everyone was preoccupied with the Goods and Services Tax. However, in a surprise move, DOC announced that deregulation of mode sub-bands would also take place on October 1st, the same date Restructuring of the Service took place.

As of October 1, the sub-bands that Canadian amateurs use for phone, RTTY, ATV, and the like, have disappeared. Canadian amateurs are now able to use any mode on any frequency within their amateur bands, subject only to the following bandwidth restrictions:

1.8-2.0, 3.5-4.0, 7.0-7.3, 14.0-14.35, 18.068-18.168, 21.0-21.45, and 24.89-24.99 MHz: 6 KHz; 10.1-10.15 MHz: 1 KHz; 28.0-29.7 MHz: 20 KHz; 50-54 MHz and 144-148 MHz: 30 KHz. 220-225 MHz: 100 KHz; 430-450 and 902-928 MHz: 12 MHz. All other amateur bands: not specified.

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QCWA Wisconsin Badger Chapter 174 Meets, Set Goals

By Frank L. Guth, W9BCC
Secretary, WI Badger Chapter 174
1632 Ellis Street
Stevens Point, WI 54481

Twenty nine people, members, spouses, and friends gathered on September 8 at the Post Restaurant in Iola, Wisconsin, for the first such meeting of the Quarter Century Wireless Association Wisconsin Badger Chapter 174. After

an hour of eyeball ragchews with refreshments, the group sat down for a family style dinner at noon.

After the dinner, arrangements were made for the ladies to tour scenic Iola and the headquarters for Krause Publications, known internationally for its publication of magazines on antique cars, coins, stamps, and other hobby collecting, comic books, etc.

The members then sat down to map out future activities and aims of our new Chapter 174. Many ideas were tossed about and discussed. Our original QCWA Charter was displayed, and charter membership was closed at the end of the meeting.

The chapter's next meeting will be in May, 1991. □

Maritime Mobile CW Operators Needed for Reserve Fleet

CW operators are needed to man the nation's ready reserve maritime fleet to transport supplies to the Persian Gulf. John Gebuhr, WB0OMC, reports that 40 vessels have been taken out of mothballs, and crews to take them to sea are being put together.

He says that the United States government wants radio operators who hold FCC radiotelegraph operators' licenses to volunteer for radio operator assignments on these ships.

- WB0OMC in Westlink Report, 10/12/90

Wisconsin Repeater Directory

Courtesy of the Wisconsin Association of Repeaters

The WISCONSIN ASSOCIATION OF REPEATERS is an organization of trustees and representatives of repeaters, state-wide, whose goal is mutual cooperation on the VHF UHF spectrum, in the spirit of Amateur Radio.

GENERAL FREQUENCY COORDINATION POLICIES

1. We attempt to place no two repeaters on the same pair closer than 120 miles.
2. We attempt to place no repeater on a 15 kHz split pair closer than 40 miles to any adjacent 30 kHz standard spacing machine.
3. We not only assist proposed repeaters in finding a frequency where possible, but we actively attempt to protect coordinated repeaters' frequencies from interference whenever possible.
4. W.A.R. has suggested band plans for most of the FM spectrum, a subaudible tone plan for the State of Wisconsin and all necessary information for coordination of new or modifications to existing repeaters. Contact the Frequency Coordinator.

Nels Harvey, WA9JOB
Wisconsin Association of Repeaters
P.O. Box 23166
Milwaukee, WI 53223

O	Carrier Access	B	Burst
PL	Sub-Audible Continuous Tone	T	Touch-Tone
W	Whistle	C	Closed Private Repeater
A	Autopatch	(CA)	Closed Private Autopatch
E	Emergency Power	L	Link and/or Crossband
P	Portable	R	RACES Affiliated
Y	RTTY/ASCII	Z	Autopatch to Law Enforcement
PAC	Packet Data Exchange	X	Wide Area Coverage

Wisconsin Sub-Audible Tone Plan By Region

North Central - 2A, 114.8 HZ.	North East - 1B, 107.2 HZ.
North West - 2Z, 110.9 HZ.	South Central - 3Z, 123.0 HZ.
South East - 3A, 127.3 HZ.	South West - 3B, 131.8 HZ.

Standard Inputs Unless Otherwise Noted

-600 KHz. below 147.00 MHz, +600 KHz. TO 148.00 MHz.
-1.6 MHz. for 220 MHz, and + 5 MHz. for 440 MHz.
421.25 MHz. TV Video + 18 MHz. 425.75 MHz. TV Aural, + 9 MHz.

Location	Rg	Output	Call	Access	Update OK=*	Sponsor	Updated
ALLENTON	SE	442.350	N9GMT	O A E L X PL 114.8	*	L-FM 38	08/24/90
ANTIGO	NC	145.310	KD9HH		*	KD9HH	04/01/90
APPLETON	NE	145.150	K9DHR	O CA E Z		C L RPT G	
APPLETON	NE	145.330	WB9ANR	O PL 107.2	*	F V VHF A	03/14/90
APPLETON	NE	146.760	K9OQO	O	*	F V VHF A	04/20/90
APPLETON	NE	443.025	WB9IYV	C		WB9IYV	
APPLETON	NE	443.650	W9DKY	O	*	W9DKY	04/20/90
BALDWIN	NW	145.130	W9AVX	O Z	*	ST.CR CD	06/08/90
BALDWIN	NW	147.330	WD9GWH	O	*	ST.CR RA	06/08/90
BARABOO	SC	146.880	WA9WVE	O E X	*	C W R A	04/04/90
BAYFIELD	NW	146.610	W9BCY	O	*	NLAND ARC	06/11/90
BELOIT	SC	146.670	WA9JTX	O E R	*	BELOIT AR	03/14/90
BERLIN	SC	443.850	N9AOZ	O A PL 123.0	*	N9AOZ	06/08/90
BURLINGTON	SE	146.745	WD9IGV	O	*	H L H R G	03/30/90
BURLINGTON	SE	224.060	N9BBQ	O PL A E	*	SE WI ERS	03/20/90
CEDARBURG	SE	224.180	W9CQO	O	*	O.R.C.	03/25/90

CEDARBURG	SE	443.225	WD9DHI	O PL 114.8	*	W E R A	03/14/90
CHIPPEWA FALLS	NW	146.880	WA9PAM	O	*	WA9PAM	08/20/90
CHIPPEWA FALLS	NW	444.350	WA9PAM	O	*	WA9PAM	08/20/90
COLGATE	SE	444.725	NY9Y	O	*	NY9Y	02/20/90
CRIVITZ	NC	145.470	KA9YQJ	O PL 114.8 CA	*	KA9YQJ	08/20/90
DE PERE	NE	443.750	KE9LZ	O	*	N9EPC	03/18/90
DELAFIELD	SE	146.820	W9OOW	O CA E X	*	SEWFARS	03/14/90
DELAFIELD	SE	444.125	WB9WHG	O E PL 114.8	*	SEWFARS	03/14/90
DORCHESTER	NC	145.270	WA9ZCO	O A E Z (TEMP OFF)	*	WA9ZCO	03/30/90
EAGLE RIVER	NC	145.390	KD9PT	O	*	KD9PT	03/14/90
EAU CLAIRE	NW	146.910	K9UXP	O A E X	*	E C ARC	06/11/90
EAU CLAIRE	NW	147.195	KA9LJK	O	*	KA9LJK	07/16/90
EAU CLAIRE	NW	147.240	KA9ELD	O CA E	*	E C ARC	06/11/90
EAU CLAIRE	NW	443.300	KB9R	O	*	KB9R	03/14/90
EAU CLAIRE	NW	444.675	KA9LJK	O	*	KA9LJK	07/16/90
ELKHORN	SE	146.865	WA9AJW	O	*	W CO ARES	06/08/90
ETTRICK	SW	146.700	WA9HCZ	RTTY	*	WA9HCZ	06/11/90
FALL CREEK	NW	145.470	K9ZVZ	O A E	*	K9ZVZ	03/20/90
FOND DU LAC	NE	147.090	WD9ESH	O A E	*	FOND ARC	03/14/90
FOND DU LAC	NE	223.740	WA4COY	O B CA	*	WA4COY	09/13/90
FOND DU LAC	NE	444.150	WA4COY	O B A PL 107.2	*	WA4COY	09/13/90
FORT ATKINSON	SC	224.420	N9DTT	PL	*	N9DTT	03/14/90
FREMONT	NC	147.015	N9AOT	O TT CA L 29.600	*	N9AOT	03/14/90
GERMANTOWN	SE	147.045	WB9EFP	C CA	*	WB9EFP	04/20/90
GERMANTOWN	SE	443.525	WB9EFP	O	*	WB9EFP	04/20/90
GREEN BAY	NE	147.120	K9GB	O A E Z	*	G B M&K	03/15/90
GREEN BAY	NE	147.270	KE9LZ	O TT 31UP 32 DOWN	*	NE WRL	06/08/90
GREEN BAY	NE	147.360	K9EAM	O A E Z	*	GB M&C	03/15/90
GREEN BAY	NE	223.940	WA9SXN	C	*	WA9SXN	
GREEN BAY	NE	224.140	KZ9O	O A E L	*	G B R USR	06/08/90
GREEN BAY	NE	443.500	WA9SWX	O A E Z	*	GB M&K	03/15/90
GREEN BAY	NE	444.200	WB9VJV/A	C	*	WB9VJV	06/08/90
GREEN LAKE	SC	146.955	KB9WC	O E	*	G FOX ARC	04/04/90
GREEN LAKE	SC	444.400	KB9WC	O	*	G FOX ARC	04/04/90
GREENDALE	SE	442.150	KD9Y	O	*	K.R.G.	
GREENFIELD	SE	52.880	WB9WKR	O	*	GF LD 6RS	08/20/90
HAYWARD	NW	147.255	KB9D	O CA	*	NVWA	08/08/90
HAYWARD	NW	444.850	N9EGE	O	*	N9EGE	03/14/90
HERTEL	NW	147.300	WB9RAY	O A	*	B.A.R.S.	03/14/90
HERTEL	NW	224.500	WB9RAY	O A	*	B.A.R.S.	03/14/90
HERTEL	NW	443.500	WB9RAY	O A	*	B.A.R.S.	03/14/90
HILLSBORO	SW	145.370	KA9WNX	O	*	KA9WNX	03/14/90
HIXTON	SW	146.940	KC9YE	O	*	T-J RA	03/14/90
HUBERTUS	SE	145.250	KA9HLP	O	*	A.R.E.S.	11/24/89
IRMA	NC	146.730	K9GTQ	O	*	K9GTQ	03/25/90
JANESVILLE	SC	145.450	WB9ACY	O A E	*	R A T SYS	03/30/90
JEFFERSON	SC	145.490	W9MQB	O	*	TCARC	03/30/90
JUNEAU	SC	146.640	W9TCH	O A E Z911 WX	*	ROCK R RC	03/30/90
KAUKAUNA	NE	444.450	N9DZ	O CA	*	ND9Z	09/16/90
KENOSHA	SE	147.075	WA9YTH	O A E PL 127.3	*	WA9YTH	03/30/90
KENOSHA	SE	224.800	WB9LST	O Z E L	*	WB9LST	03/14/90
LA CROSSE	SW	146.760	K9CUT	O	*	L C R ASC	06/08/90
LA CROSSE	SW	146.970	WA9HHM	O A E	*	RVRNDARC	06/08/90
LA CROSSE	SW	147.090	N9ETD	O	*	FRUIT ARC	02/07/90
LA VALLE	SC	442.400	W9EBF	O PL 123.0	*	W9EBF	05/07/90
LAC DU FLAMBEAU	NC	146.670	N9ADA	O PL	*	N9ADA	07/02/90
LODI	SC	147.225	K9EY	O CA E PL 114.8	*	K9EY	06/08/90
MADISON	SC	146.685	W9YT	O PL 107.2	*	UW-B ARS	07/20/90
MADISON	SC	146.760	WB9AER	O B A E	*	M A R A	07/20/90
MADISON	SC	146.940	W9FZC	O PL 123.0	*	C W R A	04/04/90
MADISON	SC	147.150	WB9AER	O B A E	*	M A R A	07/20/90

120 Attend Boy Scout Camporee near Iola; Ham Radio Demonstration is Enjoyed

By Carl Lassanske, N9JXB
Route 1, Box 449
Wautoma, WI 54982

On the weekend of October 5-7, 1990, Boy Scout Troop 631 of Iola hosted the Boy Scouts of America District 6, of the Bay Lakes Council, at the Iola Ski Hill, about ten miles northwest of Iola. The occasion was the scouts' Fall Camporee, at which approximately 120 scouts and adults participated.

Bill Riemer, KA9SPI, who is also the Assistant Scoutmaster of Troop 631, prepared the agenda for the weekend, which included setting up and

operating a portable HF station at the Ski Hill. The station was used to give the scouts the exciting "hands on" experience of making contacts on ham radio. Two meters was also used at the site.

Scouts were given the opportunity to pre-register for this and other activities in the informational packet that was mailed to troops in District 6 of the Bay Lakes Council.

The ham radio demonstration took place between 1:30 and 3:00 p.m. During this time, as many as 15 interested scouts looked, listened, asked questions, and talked on the air. In addition, a group of six boys sat down in the warm afternoon sun and listened while Bill Riemer, KA9SPI, explained the dits and dahs of Morse code.

Chuck Fritz, N9DCF, and Marilyn Lassanske, WB9MFC, took turns operating the HF rig while explaining how to make a contact, and then impressed the scouts by actually doing it. The big thrills came when the mike was handed over to the scouts and foreign voices came back to them, using their first names. The 10 and 15 meter bands were open, and Russia, Denmark, England, Canada, Portugal, and the Dominican Republic all were

MADISON	SC	224.160	WB9RSQ	O A	* WB9RSQ	06/08/90	PLYMOUTH	NE	444.350	WE9R	O PL 114.8	* WERA	08/20/90
MADISON	SC	443.000	NZ9B	O	* BURG	07/09/90	POWERS LAKE	SE	443.925	KC9XN	O PL 114.8	* L/K AMA S	06/08/90
MADISON	SC	443.675	KD9UU	O PL114.8 OA'71' L	* KD9UU	03/30/90	PORT WASHINGTON	SE	146.970	W9CQO	O A PL 127.3 EXZ	* ORC	03/25/90
MADISON	SC	444.000	KA9VDU	O PL 123.0	* KA9VDU	03/14/90	RACINE	SE	147.270	W9UDU	O A E Z I P R	* L/S RP A	03/15/90
MADISON	SC	444.500	WB9TAE	O PL 123.0 E L	* WB9TAE	03/14/90	RACINE	SE	443.950	KA9JMK	O PL 127.3	* KA9JMK	06/08/90
MADISON	SC	444.775	NG9V	O PL 114.8	* NG9V	04/04/90	RACINE	SE	444.050	KA9LOK	O	* KA9LOK	04/20/90
MANITOWOC	NE	145.190	WB9MFB	O X PL 107.2	* WB9MFB	03/21/90	RHINELANDER	NC	146.940	W9ZZZ	O A E	* RHIN RP A	06/08/90
MANITOWOC	NE	146.610	W9DK	O TT	* MANCORAD	09/16/90	RICE LAKE	NW	145.110	WA9CXN	O	* WA9CXN	09/13/90
MANITOWOC	NE	146.700	K9FWR	RTTY	* K9FWR	12/10/89	RICE LAKE	NW	147.030	WB9WFG	O E	* BAR ARES	04/04/90
MANITOWOC	NE	147.030	N9GHE	O A K	* N9GHE	03/14/90	RICHLAND CTR	SW	146.910	WB9SLI	O PL	* P V RP A	03/30/90
MANITOWOC	NE	224.540	N9GHE	O CA	* N9GHE	03/14/90	RUBICON	SC	145.350	WB9KPG	O A E Z	* WB9KPG	03/14/90
MANITOWOC	NE	443.975	N9GHE	O	* N9GHE	03/14/90	SALEM	SE	223.720	N9BBQ	O A E L Z	* N9BBQ	03/20/90
MARINETTE	NE	147.000	NT9B	O ALSO MEMOMONEE MI			SHAWANO	NC	145.350	WA9BZW	O A PL 114.8	* WA9BZW	03/14/90
MARSHFIELD	NC	147.180	WN9K	OAE Z911 L 444.975	* MARSH ARS	03/14/90	SHEBOYGAN	NE	145.110	KR9S	O	* SHEB DX	06/23/90
MARSHFIELD	NC	444.975	WN9K	O E L 147.18	* MARSH ARS	03/14/90	SHEBOYGAN	NE	147.060	W9RF	O CA	* SHEB ARC	06/23/90
MEDFORD	NC	147.150	W9QHI	O E P WX	* TAYLOR	08/20/90	SISTER BAY	NE	147.180	W9QBJ	O	* WA9PFQ	
MENOMONIE	NW	146.610	W9WDK	O	* R CDR RA	03/21/90	SLINGER	SE	146.730	W9MQD	O TT 1200	* WA CO RG	03/14/90
MENOMONIE	NW	146.805	N9HNI	O	* N9HNI	06/08/90	SPOONER	NW	147.135	KE6WF	O E Z	* KE6WF	07/09/90
MENOMONEE FALLS	SE	444.425	KA9FIN	O	* SHRINE CL PROP.		STEVENS POINT	NC	146.670	WB9QFW	O A E Z	* CNT WI RA	03/25/90
MILTON	SC	146.715	WD9FKW	O CA PL T	* WD9FKW	03/20/90	STEVENS POINT	NC	146.985	W9NN	O	* CNT WI RA	03/25/90
MILWAUKEE	SE	29.620	WB9ZRB	O	* IND RP SY	03/14/90	STEVENS POINT	NC	443.950	K9MIF	O	* K9MIF	07/02/90
MILWAUKEE	SE	29.680	N9BBG	O PL 127.3	* N9BBG	03/25/90	STOCKBRIDGE	NE	145.210	KB9IE	O PL	* P GRNT RA	03/20/90
MILWAUKEE	SE	53.030	WB9TRO	O E	* W E R A	03/14/90	STOCKBRIDGE	NE	224.500	KB9IE	O A L	* KB9IE	03/20/90
MILWAUKEE	SE	52.680	WB9ZRB	O	* IND RP SY	03/14/90	STOUGHTON	NW	421.250	N9BXA	O ATV ALSO 923.25	* N9BXA	06/11/90
MILWAUKEE	SE	145.130	N9EGR	O AE Z X PL 141.3	* MAARS	07/16/90	STURGEON BAY	NE	146.730	WB9YUY	O PL	* WB9YUY	03/14/90
MILWAUKEE	SE	145.170	W9FK	O	* W A RAC	03/15/90	STURGEON BAY	NE	147.210	W9AIQ	O CA E Z	* DOOR E G	03/15/90
MILWAUKEE	SE	145.230	N9BMH	PL 141.3	* N9BMH	06/08/90	STURGEON BAY	NE	444.000	WB9YUY	O	* WB9YUY	03/14/90
MILWAUKEE	SE	145.390	WB0AFB	O PL 127.3	* WB0AFB	03/03/90	STURTEVANT	SE	29.640	WA9ZYU	O	* WA9ZYU	05/27/90
MILWAUKEE	SE	146.625	WB9ZRB	O	* WB9ZRB	03/14/90	STURTEVANT	SE	224.740	WA9ZYU	O A	* WA9ZYU	05/27/90
MILWAUKEE	SE	146.790	W9HHX	O A PL	* MSOE ARC		SUPERIOR	NW	145.490	K9ASC	O	* DC RACES	04/04/90
MILWAUKEE	SE	146.850	W9KHO	O PL 127.3 CA	* MICORS	07/27/90	SUPERIOR	NW	146.760	W9BWK	O	* T P A RA	03/30/90
MILWAUKEE	SE	146.910	WA9JOB	O E Z X PL 127.3	* M.R.C.	03/03/90	SUPERIOR	NW	146.820	WA9VDW	O PL A	* T P A RA	03/30/90
MILWAUKEE	SE	147.000	W9PY	O PL 146.2	* P.R.C.	04/20/90	SUPERIOR	NW	444.900	WA9KLM	O A	* WITC ARC	06/08/90
MILWAUKEE	SE	147.105	K9IFF	C CA TT	* K9IFF	03/14/90	TOMAH	SW	145.390	N9BOE	O A E Z	* N9BOE	09/03/90
MILWAUKEE	SE	147.135	N9YT	O PL 141.3	* NY9T	03/14/90	TOMAHAWK	NC	145.430	N9CLE	O	* TOM RP A	06/08/90
MILWAUKEE	SE	147.165	WB9SDD	O PL 127.3	* WB9SDD	09/13/90	TOMAHAWK	NC	223.760	N9CLE	O	* TOM RP A	06/08/90
MILWAUKEE	SE	147.330	N9EDL	O A PL 114.8	* N9EDL	06/06/90	TOMAHAWK	NC	444.575	N9CLE	O	* N9CLE	08/14/90
MILWAUKEE	SE	224.680	WD9ABR	O PL CA	* WD9ABR	03/25/90	TREVOR	SE	145.290	KA9VZD	O PL 107.2 A E L	* STLIN ARC	06/08/90
MILWAUKEE	SE	224.720	W9KHO	O CA PL 114.8	* MICORS	07/27/90	TREVOR	SE	442.600	KA9VZD	O E A Z L 145.29	* KA9VZD	06/08/90
MILWAUKEE	SE	224.960	WB9TYT	O CA PL 114.8	* WB9TYT	07/27/90	WALLES	SE	224.120	WB9DRO	O PL 114.8	* WB9DRO	03/14/90
MILWAUKEE	SE	443.150	W9KHO	O PL 114.8	* MICORS	07/27/90	WALLES	SE	444.975	WB9DRO	O PL 114.8	* WB9DRO	03/14/90
MILWAUKEE	SE	443.300	WB9TYT	O PL 114.8	* WB9TYT	07/27/90	WAUKESHA	SE	147.390	N9KS	O	* E.A.R.S.	05/10/90
MILWAUKEE	SE	443.550	K9HXA/A	C	* K9HXA	03/14/90	WAUKESHA	SE	224.460	KE9TA	O PL 85.4 CA	* KE9TA	07/09/90
MILWAUKEE	SE	443.750	WA9POV	PL 127.3	* M UHF SO	03/15/90	WAUPACA	NC	145.410	WD9GJW	O CA	* P WD9GJW	07/14/89
MILWAUKEE	SE	443.800	N9GMT	O A E Z L PL 114.8	* FM 38	03/15/90	WAUPACA	NC	146.835	N9BKJ	O	* N9BKJ	06/08/90
MILWAUKEE	SE	444.200	K9HXA/A	C	* K9HXA	03/14/90	WAUPACA	NC	146.925	KE9UT	O	* N9IKP	03/20/90
MILWAUKEE	SE	444.250	N9DII	C PL 114.8	* N9DII	06/08/90	WAUPACA	NC	147.390	WA9FDC	O	* WP'ACA RC	05/07/90
MILWAUKEE	SE	444.325	N9CFG	O PL 114.8	* WERA	06/08/90	WAUPACA	NC	442.000	KE9UT	O	* N9IKP	03/20/90
MILWAUKEE	SE	444.800	K9HXA/A	C	* K9HXA	03/14/90	WAUPACA	NC	444.825	N9BKJ	O L	* N9BKJ	06/08/90
MILWAUKEE	SE	444.850	WB9TRO	C PL A E L	* WERA	03/14/90	WAUSAU	NC	146.640	W9SM	O E CA L Z X	* W.V.R.A.	03/30/90
MILWAUKEE	SE	444.875	WB9TRO	C	* WERA	03/14/90	WAUSAU	NC	146.820	W9BCC	O E Z CA L X	* RIB MT RA	05/27/90
MILWAUKEE	SE	444.950	N9EDL	O A	* N9EDL	06/06/90	WAUSAU	NC	147.060	W9KRY	O CA E	* KC9NW	07/02/90
MINERAL POINT	SC	146.655	NX9V	O	* NX9V	06/06/90	WAUSAU	NC	224.640	W9SM	O E CA L Z X	* WI VAL RC	06/08/90
MONROE	SC	145.110	NR9W	O	* G C ARA	03/20/90	WAUSAU	NC	421.250	AD9W	O E H SYNC	* VIDEO	06/08/90
NORTH FREEDOM	NC	442.050	WA9SOV	PACKET	* WA9SOV		WAUSAU	NC	425.750	AD9W	AURAL	* -4.5 IN	06/08/90
NEW BERLIN	SE	147.285	W9EBF	O PL	* W9EBF	05/07/90	WAUSAU	NC	923.250	AD9W	O H SYNC	* AD9W	04/01/90
NEW BERLIN	SE	442.400	W9EBF	O PL	* W9EBF	05/07/90	WAUSAU	NC	923.250	AD9W	O AURAL 927.75 L	* AD9W	03/31/90
NEW HOLSTEIN	NE	147.300	K9LGU	O A E Z	* C.A.R.E.S	09/16/90	WAUSAU	NC	443.750	KC9NW	O CA	* KC9NW	08/20/90
NEW LONDON	NE	146.625	WB9ICH	O	* WB9ICH	03/14/90	WAUSAU	NC	443.750	KC9NW	O CA E	* KC9NW	07/02/90
OSHKOSH	NE	147.240	WB9TDO	O TT	* WIN CTY E	08/20/90	WAUSAU	NC	444.300	W9BCC	O E Z L	* W9BCC	03/30/90
OSHKOSH	NE	147.345	WB9ZHN	O A E Z	* SOLAR	03/14/90	WAUSAU	NC	444.700	KC9NW	O E CA PL 179.9	* KC9NW	07/02/90
PARK FALLS	NC	147.000	WB9WHP	O	* PRICE RA	04/04/90	WAUSAU	NW	145.190	NOEDV	O	* NOEDV	09/13/90
PEPIN	NW	145.350	KB9S	O	* WAB ARS		WEST ALLIS	SE	224.520	KA9JCP	O	* KA9JCP	03/15/90
PEWAUKEE	SE	147.210	WB9AKC	O PL 173.8	* W.C.T.C.	05/27/90	WEST ALLIS	SE	442.650	N9EJO	O PL T	* N9EJO	05/27/90
PEWAUKEE	SE	443.125	WB9AKC	O PL 114.8	* W.C.T.C.	05/27/90	WEST BEND	SE	443.900	N5IIA	O	* N5IIA	02/20/90
PLATTEVILLE	SW	145.270	WK9M	O A E	* WUP-ARC		WISCONSIN RAPIDS	NC	146.790	W9DQA	O E Z CA	* MID-ST RA	
PLYMOUTH	NE	224.940	KD9PE	O	* SC 220 A	03/14/90	WISCONSIN RAPIDS	NC	147.330	K9PJB	O CA E Z	* WI AIR RA	06/08/90
PLYMOUTH	SE	444.100	KD9TZ	O PL 107.2	* KD9TZ	03/14/90							

logged, in addition to many stateside contacts.

We also used two meters in the demonstration, utilizing the Waupaca Amateur Radio Club repeater (147.39). Norman McNew, KB9QL, from Oak Creek, WI, who was visiting Waupaca for the weekend, and Milt Heeren, KB9CFO, from Oxford, WI, welcomed the scouts to two meters, and answered the many questions they had about the hobby and about the radios they were talking on.

The weather cooperated and provided all with a beautiful Fall day. The scouts who experienced the thrill of ham radio were still talking about it over supper that evening. As members of the Waupaca Amateur Radio Club, Bill, KA9SPI; Chuck, N9DCF; Marilyn, WB9MFC; and yours truly, N9JXB, can truly say we enjoyed having the opportunity to introduce our hobby to these Boy Scouts, who had little knowledge of or contact with Amateur Radio.

From the Editor

If this issue of *Badger State Smoke Signals* looks different - hopefully, easier to read - it's because we're using a borrowed IBM clone computer. This computer lets us use all of the wonderful (to me, at least) features in our Hewlett-Packard LaserJet III laser printer. Among other "luxuries" is access to italics, bold face, and scalable type faces/sizes. Actually, those capabilities are basic and essential for a newspaper.

A very good friend drove a 240-mile round trip to bring this computer here so that I'd have time to learn about MS-DOS computers and about WordPerfect 5.1. I'm learning!

As you know, the Riverland Amateur Radio Club has issued a match challenge to the other clubs which use BSSS on a monthly basis. The challenge ends on December 31, 1990. The funds from the challenge will be used to purchase a current-model IBM compatible computer, which will be used to produce this newspaper. There is no question but that we do need a new computer here and, since I've been discovering all of the things this system can do, I'm even more aware of just how badly we need a new computer. We are grateful to the RARC for making the challenge, and thus showing their support for our volunteer work here in our editorial office (my living room).

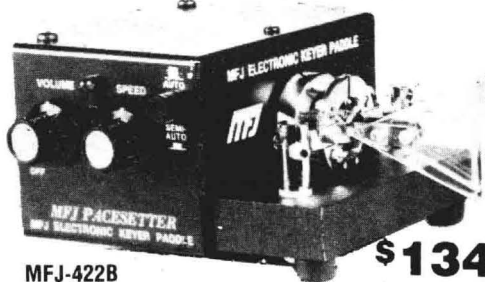
All of the clubs (and individuals, if any) who contribute to this effort by RARC will be recognized here in BSSS in one of the first issues of 1991. Again, our sincere thanks to RARC, and to all who help. We try to produce a first-rate newspaper, and the new computer will help, indeed.

On the less-than-good-news front, the BSSS committee has had to raise the subscription rates. We are confronted with what will likely be an appalling increase in postage rates for mailing this newspaper, quite possibly 33% more than we are paying now. Production costs continue to rise, too. The new rate schedule is on page 15. New and renewal one, two or three year subs will be accepted at the old rates until January 1, 1991. The club rates will not increase until April 1, 1991.

We had intended for ad fees to pay for production costs, but we still do not have anyone to sell ads! If we had had a salesperson, the increase might have been avoided. We still need a salesperson; if you're interested, please contact our chairman, Kenneth A. Ebner, K9EN, 822 Wauona Trail, Portage, WI 53901, or call Ken at (608) 742-3560.

BEST OF MFJ

MFJ, Bencher and Curtis team up to bring you America's most popular keyer in a compact package for smooth easy CW



MFJ-422B

\$134.95

The best of all CW world's -- a deluxe MFJ Keyer using a Curtis 8044ABM chip in a compact package that fits right on the Bencher iambic paddle!

This MFJ Keyer is small in size but big in features. you get iambic keying, adjustable weight and tone and front panel volume and speed controls (8-50 WPM), dot-dash memories, speaker, sidetone and push button selection of automatic or semi-automatic/ tune modes. It's also totally RF proof and has ultra-reliable solid state outputs that key both tube and solid state rigs. Use 9 volt battery or 110 VAC with MFJ-1305, \$12.95.

The keyer mounts on a Bencher paddle to form a small (4-1/8 x 2-5/8 x 5/16 inches) attractive combination that is a pleasure to look at and use.

The Bencher paddle has adjustable gold plated silver contacts, lucite paddles, chrome plated brass and a heavy steel base with non-skid feet.

You can buy just the keyer assembly, MFJ-422BX, for only \$79.95 to mount on your Bencher paddle.

Deluxe 300 W Tuner



MFJ-949D is the world's most popular 300 watt PEP tuner. It covers 1.8-30 MHz, gives you a new peak and average reading. Cross-Needle SWR/Wattmeter, built-in dummy load, 6 position antenna switch and 4:1 balun -- in a compact 10 x 3 x 7 inch cabinet. Meter lamp uses 12 VDC or 110 VAC with MFJ-1312, \$12.95.

Antenna Bridge

MFJ-204B

Now you can quickly optimize your antenna for peak performance with this portable, totally self-contained antenna bridge.

No other equipment needed -- take it to your antenna site. Determine if your antenna is too long or too short, measure its resonant frequency and antenna resistance to 500 ohms. It's the easiest, most convenient way to determine antenna performance. Built in resistance bridge, null meter, tunable oscillator-driver (1.8-30 MHz). Use 9 V battery or 110 VAC with AC adapter, \$12.95.

SuperActive Antenna

"World Radio TV Handbook" says MFJ-1024 is a "first rate easy-to-operate active antenna ... quiet ... excellent dynamic range ... good gain ... very low noise ... broad frequency coverage ... excellent choice."

Mount it outdoors away from electrical noise for maximum signal, minimum noise. Covers 50 KHz to 30 MHz.

Receives strong, clear signals from all over the world. 20 dB attenuator, gain control, ON LED. Switch two receivers and aux. or active antenna. 6x3x5 in. Remote unit has 54 inch whip, 50 ft. coax and connector. 3x2x4 in. Use 12 VDC or 110 VAC with MFJ-1312, \$12.95.

VHF SWR/Wattmeter

MFJ-812B

Covers 2 Meters and 220 MHz. 30 or 300 Watt scales. Also reads relative field strength 1-170 MHz and SWR above 14 MHz. 4 1/2x2 1/4x3 in.

MFJ Coax Antenna Switches



\$34.95 MFJ-1701



\$21.95 MFJ-1702B



\$59.95 MFJ-1704

Select any of several antennas from your operating desk with these MFJ Coax Switches. They feature mounting holes and automatic grounding of unused terminals. They come with MFJ's one year unconditional guarantee. **MFJ-1701**, \$34.95. Six position antenna switch. SO-239 connectors. 50-75 ohm loads. 2 KW PEP, 1 KW CW. Black alum. cabinet. 10x3x1 1/2 inches. **MFJ-1702B**, \$21.95. 2 positions plus new Center Ground. 2.5 KW PEP, 1 KW CW. Insertion loss below .2 dB. 50 dB isolation at 450 MHz. 50 ohm. 3x2x2 in. **MFJ-1704**, \$59.95. 4 position cavity switch with lightning/surge protection device. Center ground. 2.5 KW PEP, 1 KW CW. Low SWR. Isolation better than 50 dB at 500 MHz. Negligible loss. 50 ohm. 6 1/4x4 1/4x1 1/4 in.

"Dry" Dummy Loads for HF/VHF/UHF

MFJ-260B, \$28.95. VHF/HF. Air cooled, non-inductive 50 ohm resistor. SO-239 connector. Handles 300 Watts. Run full load for 30 seconds, derating curve to 5 minutes. SWR less than 1.3:1 to 30 MHz, 1.5:1 to 150 MHz. 2 1/2x2 1/2x7 in. **MFJ-262**, \$69.95. HF. 1 KW. SWR less than 1.5:1 to 30 MHz. 3x3x13 in. **MFJ-264**, \$109.95. Versatile UHF/VHF/HF 1.5 KW load. Low SWR to 650 MHz, usable to 750 MHz. Run 100 watts for 10 minutes, 1500 watts for 10 seconds. SWR is 1.1:1 to 30 MHz, below 1.3:1 to 650 MHz. 3x3x7 inches.

MFJ has a full line of dummy loads to suit your needs. Use a dummy load for tuning to reduce needless (and illegal) QRM and save your finals. **MFJ-260B**, \$28.95. VHF/HF. Air cooled, non-inductive 50 ohm resistor. SO-239 connector. Handles 300 Watts. Run full load for 30 seconds, derating curve to 5 minutes. SWR less than 1.3:1 to 30 MHz, 1.5:1 to 150 MHz. 2 1/2x2 1/2x7 in. **MFJ-262**, \$69.95. HF. 1 KW. SWR less than 1.5:1 to 30 MHz. 3x3x13 in. **MFJ-264**, \$109.95. Versatile UHF/VHF/HF 1.5 KW load. Low SWR to 650 MHz, usable to 750 MHz. Run 100 watts for 10 minutes, 1500 watts for 10 seconds. SWR is 1.1:1 to 30 MHz, below 1.3:1 to 650 MHz. 3x3x7 inches.

MFJ Ham License Upgrade Theory Tutor



MFJ Theory Tutor practically guarantees you'll pass the theory part of any FCC ham license exam. Versatile MFJ software is the best computer tutor ever tailor-made for ham radio. You can study the entire FCC question pool, selected areas and take (or print) sample tests. Auto. saves each study session (ex. sample tests), gives you all FCC test graphics (ex. mono.), explanations of hard questions, pop-up calculator, weighted scoring analysis, color change option and more. Order MFJ-1610-Novice; MFJ-1611-Tech.; MFJ-1612-Gen.; MFJ-1613-Adv.; MFJ-1614-Ex. for IBM compatible. For Macintosh: MFJ-1630-N; MFJ-1631-T; MFJ-1632-G; MFJ-1633-A; MFJ-1634-E, \$29.95 per license class.

MFJ Speaker Mics

MFJ-284 or MFJ-286

MFJ's compact Speaker/Mics let you carry your HT on your belt and never have to remove it to monitor calls or talk.

You get a wide range speaker and first-rate electret mic element for superb audio on both transmit and receive.

Earphone jack, handy lapel/pocket clip, PTT, lightweight retractable cord. Gray. One year unconditional guarantee.

MFJ-284 fits ICOM, Yaesu, Santec. MFJ-286 fits Kenwood.

MFJ-1278 Multi-Mode Data Controller

Use computer to transmit/receive in all 9 digital modes: Packet, AMTOR, ASCII, CW, RTTY, FAX, SSTV, Contest Memory Keyer and Navtex receive. Easy-Mail™ Personal Mailbox. Built-in printer port, 20 LED tuning indicator, AC power supply, Host/KISS, 32K RAM, Multi-gray level FAX/SSTV modem, CW key paddle jack and tons more. Options include 2400 baud modem (MFJ-2400, \$79.95) and software starter packs with computer cables, \$24.95 each, for IBM compatible, Commodore 64/128, Macintosh and VIC-20.

12/24 Hour LCD Clocks



\$19.95 MFJ-108B

Huge 5/8 inch bold LCD digits let you see the time from anywhere in your shack. Choose from the dual clock that has separate UTC/local time display or the single 24 hour ham clock.

Mounted in a brushed aluminum frame. Easy to set. The world's most popular ham clocks for accurate logs. MFJ-108B 4 1/2x1x2. MFJ-107B 2 1/4x1x2 in.

Cross-Needle SWR/Wattmeter

MFJ-815B

MFJ Cross-Needle SWR/Wattmeter has a new peak reading function! It shows you SWR, forward and reflected power in 2000/500 and 200/50 watt ranges. Covers 1.8-30 MHz.

Mechanical zero adjusts for movement. SO-239 connectors. Lamp uses 12 VDC or 110 VAC with MFJ-1312, \$12.95.

Deluxe Code Practice Oscillator

MFJ-557

MFJ-557 Deluxe Code Practice Oscillator has a Morse key and oscillator unit mounted together on a heavy steel base so it stays put on your table. Portable because it runs on a 9-volt battery (not included) or an AC adapter (\$12.95) that plugs into a jack on the side.

Earphone jack for private practice. Tone and Volume controls for a wide range of sound. Speaker. Key has adjustable contacts and can be hooked to your transmitter. Sturdy. 8 1/2x2 1/4x3 3/4 in.

MFJ Multiple DC Outlet

MFJ-1112

New MFJ DC Power Outlet saves you space and money. Hook it to your 12 VDC power supply and get 6 DC outlets for connecting your accessories. RF bypassing keeps RF out of power supply from DC line outlet. 13 1/2x2 3/4x2 1/2 in.

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John's Junk Box

By John W. Frank, WB9TQG
P. O. Box 5113
Madison, WI 53705

Homebrew Meter Shunts

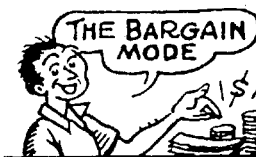
One of the characteristics of a true scrounge is working with the materials you have on hand, instead of running down to the store to buy a kit. Although my junkbox is almost empty, I was able to find exactly what I needed to make a 1.73Ω resistor to use as a meter shunt. The equations used to calculate the resistance of a meter shunt are easy to find in a number of books (including the *ARRL Handbook*), so I won't repeat them here.

According to my calculations, I needed a 1.73Ω resistor. The wire I had in my junkbox was #28. According to the wire table in the *ARRL Handbook*, #28 wire has a resistance of 66.17

Ohms per 1000 feet of wire. Therefore, one foot of wire would have a resistance of .6617Ω. I started with a 3 foot long piece of wire wrapped around a 68K 2 Watt carbon resistor. Then, using the lowest resistance range on my digital multimeter, I carefully trimmed the length of the wire until it measured between 1.7 and 1.8Ω. Next, I connected the ends of the wire to the leads of the resistor. The final step was to check the resistance of my homebrew meter shunt. It worked. It wasn't exactly 1.73Ω, but it was close enough to work without adversely affecting the accuracy of the meter or the performance of the circuit.

Before I sign off for this month, there are two precautions I must point out. First, make sure the shunt can carry the current that will be flowing through it. For example, don't use a piece of #30 wire for a shunt and expect it to carry 2 amps. Second, the resistor you use as a support for your shunt should have a relatively high value of resistance so that the combination of the resistor and the shunt you have wrapped around it won't be measurably lower than the desired value of the shunt. Remember, the carbon resistor is there just to support the wire and to provide a convenient means of connecting it to the circuit in which it will be used.

73, John



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Amateur Radio equipment for sale from the estate of Thurman L. Sipp, WK9F:

Heath HW-101 SSB transceiver, with matching Heath HP-23A AC power supply, cables included, \$100.00. **Johnson Viking "Matchbox Jr."** antenna matching accessory unit, \$85.00. **Heath 4-position** rotary coaxial antenna switch box, \$7.00. **Kenwood TS-820S** SSB transceiver with built-in AC power supply (digital readout malfunctioning), \$385.00. **Heath HN-31A** Cantenna dummy load, \$10.00. **Homebrew** (i.e., home built/made!) 40-meter crystal-controlled QRP (low power) CW transceiver, condition/design unknown, as-is, \$10.00. **Hallicrafters S-120** 1960s-era, older, short wave radio receiver, condition unknown, as-is, \$30.00. **Turner SSB+2** transistorized desk microphone, \$20.00. **Superior Electric "Powerstat"** variable autotransformer, type #116B, \$15.00. **Midland 1972** model 13-725 2-watt, 3-channel handheld CB walkie talkie portable transceiver, older, condition unknown, as-is, \$30.00. **Simpson #260** 1960s-era volt-ohmmeter with leather case, older, condition unknown, as-is, \$20.00. **Weller** soldering iron, simple unit, \$5.00. **Heath HD-1250** solid state dip meter, with case and 7 coils, \$35.00. **Homebrew** audio filter unit, condition/design/usefulness unknown, as-is, \$2.00. **Heath IM-2215** portable digital multi-meter/tester, \$50.00. **MFJ** model 108 dual readout GMT/local 24-hour small digital clock, \$12.00. **Callbooks:** 1986 DX and 1989 USA books, package for both \$10.00. **ARRL 1987 Radio Amateur's Handbook**, \$10.00. **ARRL publications:** assortment of approx. 5 books/manuals, license, antenna, operating manuals, package price \$8.00. **Homebrew** SWR/reflected power meter, condition/design unknown, \$5.00. **Shure #444-D** black desk microphone, \$30.00. **Heath HM-2140A** power output/SWR meter, \$25.00. **Mura #SP194** mono headphones, \$5.00. **Heath HD-1410** electronic CW keyer unit, \$20.00. Call Dick Lust, K9APW, at (608) 833-8335, or write Dick at 7552 Pioneer Place, Verona, WI 53593.

FOR SALE: Coax, 50Ω, Andrews 7/8" hard line with type "N" connectors, 250+ feet. Coax, 50Ω. RG-85 (not RG-58), with many connectors. Directional wattmeter remote unit with connectors for RG-85. Heathkit 1 KW dummy load. Heathkit Ham-Scan Model HO-13. Antenna, TH6-DXX. Transformer, 4 KVA high voltage Hypersil. Capacitor, 100 mFd, 4000 volt, filter. Capacitors, variable vacuum. Relay, antenna, vacuum. Twin-boom log periodic antenna, 140 through 450 MHz, 16 element. Karl L. Olberg, W4ST, 2627 Loomis Street, La Crosse, WI 54603. (608) 781-1365.

MARS Begins Service from Gulf

With some 185,000 U.S. troops now stationed in Saudi Arabia and its surroundings, the Military Affiliate Radio System (MARS) is gearing up for traffic handling to and from the States. With Saudi approval, the Army now has call signs for ten stations; traffic has been reported from three, and there already is enough of a backlog of messages in Saudi Arabia and at the MARS gateway in Germany that some messages have been "pouched" home from Europe.

According to *Broadcasting* magazine, low-powered TV transmitters deployed to Saudi Arabia also awaited approval of the Saudi government before they could begin retransmitting stateside TV.

The Air Force has 18 (MARS) stations approved, with perhaps eight actually operating, handling 250 or so written messages and fifty phone patches per day.

The Navy-Marine Corps MARS got a head start on its sister services, since they did not have

to wait for host agreements with the Saudis to operate from aboard ship. Phone patches and written traffic have been handled from afloat, much of the messages through AMTOR mailboxes on both U.S. coasts.

Extra radio equipment for morale use, on loan from Harris Corporation, has been placed on two hospital ships in the region.

So far, only outgoing traffic is being accepted from the Persian Gulf area to the continental U.S. Two private initiatives are relieving the pressure that otherwise might be building: AT&T is accepting fax messages from people in the States to participants in Operation Desert Shield - free of charge. U.S. Sprint is handling free telephone calls from the hospital ships and free phone calls in response to emergency messages from home, which are handled by the Red Cross.

The ARRL has offered to assist MARS with recruiting, through the pages of *QST*, and with U.S. distribution of messages if the load gets too heavy for their own nets.

- The ARRL Letter, 10/5/90

**AMATEUR RADIO
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Wisconsin Nets Association

(Continued from page 4)

Glass Arm Report (Wisconsin Slow Speed Net)

Lee G. Andreas, N9BDL
Net Manager

Route 1, 7600 Highway D East
Lake Tomahawk, WI 54539-9500

The fall colors are at their peak as this report is being typed, but will be only a memory when you get to read it.

The adventures of Sir Slim of Baghdad are at a fever pitch right now too, but who knows what that crafty character will be up to when the soft autumn breezes turn to sharp winter-like winds. The only way to keep up with this wily one is to check into the WSSN every night. Those who do check in frequently have the knowledge to competently answer queries of Sir Slim's worshippers. The Baker Street irregulars have nothing on this guru and his Groupies. Don't miss the fun, and learn how to pass traffic all at the same time. Bargains like this are few and far between.

Some of those who frequented the frequency this past quarter included: Dwight, AG9G, and

Chuck, KZ9V, of Phillips; Adrian, KA9FVX, of Poplar; Mary, NS9Q, and Willa, KA9YON, of Rhinelander; Keith, KY9P, and Mike, N9JIY, of West Bend; Don, K9KSA, of Brookfield; Larry, WB9ICH, of New London; Ralph, K9BED, of Milwaukee; The King Family, WF9I, N9GLG, and N9JRC, of Menomonie; Ade, K9DHR, of Kaukauna; Ray, W9KHH, of Grafton; His Honor the Mayor of New Holstein, Denny, K9LGU; Art, NT9X, of Arbor Vitae; Don, WD8KQF, of Iron River, Mich., and last but not least, Sir Slim of Baghdad and Redeyes. To catch these last two calls, you must be present daily at 6:30 p.m. on 3.645 MHz.

The WSSN and all of its members and delegates congratulate the new officers of the Wisconsin Nets Association Ltd. To Don Stenz, Chairman; Bob Towns, Secretary; and Keith Shilhavy, Treasurer, may your tenure be challenging and rewarding.

Until next year, keep hamming it up, and do your code skills a favor by checking into the WSSN.

73, Lee G. Andreas, NM

KC9CJ/SILENT KEY: At press time, we learned that Section Traffic Manager Dick Hugi, KC9CJ, died suddenly on Oct. 24. He had recently moved from Milwaukee to Wisconsin Rapids. Our deepest sympathy to his family.

- Editor

Wisconsin Intrastate Net/Late (WIN/L)

Ed Rice, W9NGP, Net Manager
W-126 Lang Road
Oconomowoc, WI 53066

We have made a slight change in our procedure for handling THRU traffic. Although not all the NCS are using it yet, it should improve our operation with respect to THRU traffic. Now we need more volunteers to take THRU traffic to the daytime 9th region nets, the Badger Emergency Net, and the Wisconsin Sideband Net. If you want more action on the traffic nets, try this unique opportunity to combine CW and phone operation. You can volunteer by sending, "9RN TX", or "BEN TX", or "SSB TX" when you check into WIN/L at 2200. NCS will route THRU traffic to you, which you will take to the daytime phone nets the next day.

Traffic handlers who have THRU traffic left on the hook by 2200 still have one more chance to move it by checking into WIN/L.

W9YCV leads the net for this quarter with 81 check-ins to WIN/L. W9KLN performed the 9th Region chores 30 times during the quarter. KA9OBP has been heard on the nets several times lately, and we hope he will find more time to join us.

73, Ed

Racine Megacycle Club

R. Stephen Bellgraph,
K9ZL, Secretary
402 Shelly Drive
Racine, WI 53405

November Meeting: Safety Program

The RMC November meeting will feature a presentation by the Wisconsin Electric Power Company's Safety Division. We have invited the American Red Cross Disaster Team's members to join us and any interested ARES members for the meeting. The WEPCO representative will bring a mockup of a section of town and demonstrate the safety problems we may encounter when out in the field on disaster assessment or in severe weather.

- Dave Voss, WB9USI

8 October 1990 Meeting Minutes

The meeting opened at 7:58 p.m.

Dave, WB9USI, discussed the predicted earthquake and how it might affect this part of the country. He suggested that we all keep our equipment in good operating condition in case we

are needed.

Motion made that the minutes, as published in *Badger Smoke Signals*, are accepted.

Treasurer's report given and accepted. Balance to date, \$238.47.

Old Business

There was a general discussion about continuing a club subscription to *Badger Smoke Signals*. All comments were positive, citing the value and interest in various items covered in the publication, the only negative being the time factor, we would not be able to get information out to members quickly if required.

After the discussion of cost of getting BSS against the cost of publishing our own newsletter plus all of the necessary work involved, subscribing to BSSS was the best choice.

A motion was made and accepted to keep our dues the same, but collect an additional fee for BSS. Anyone who already gets BSS would not be required to pay the extra fee.

Bill, W9OVZ, reported that all work on the generator was complete, and ready for next Field Day. He gave a rundown on what had been done.

Members thanked Bill for all the work he has done.

Jim, KA9LOK, on behalf of the Repeater Association, thanked the club for disposing of excess equipment at the Grayslake flea market.

It was brought to the attention of the club that

our antenna is still in poor condition. Seems that the weather hasn't been bad enough yet for antenna work.

New Business

Dave, WB9USI, reported getting a packet message about special event station WV7T/9. (Editor's Note: The station, celebrating the Navy's 215th birthday, operated from the Great Lakes Naval Training Center on October 13 and 14 UTC. If you worked this station, you may get a special QSL card by sending an SASE to WV7T/9, Mike Anderson, 2381-C Delaware Avenue, Great Lakes IL 60088-2510.)

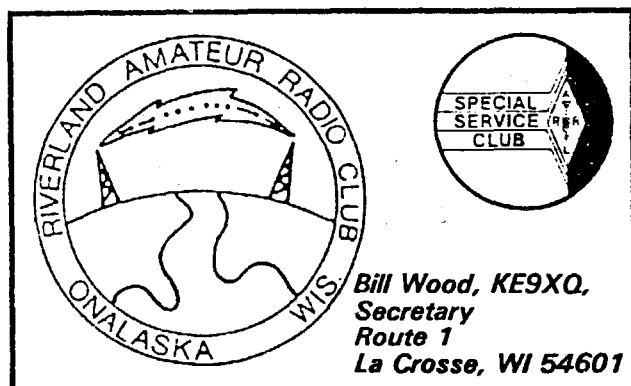
Dave also announced that he is going to be active in the Boy Scout Jamboree on the Air operation. There will be two stations operating, the club station and one set up at the scout camp. The operation will be the weekend of Oct. 20, and he has room for helpers. Does anyone want to sign up?

Dave discussed what is going on with the space vehicle. Operations are being relayed on 14.296 MHz.

The club will have two tables at the Waukesha swap meet next January. Any member with just a few items to sell should bring them.

Dan Miller, KA9OIL, announced that the next transmitter hunt will be held on Friday, 19

(Please turn to page 15)



**Bill Wood, KE9XQ,
Secretary
Route 1
La Crosse, WI 54601**

Greetings.

The regular monthly meeting of the Riverland Amateur Radio Club was called to order by our president, Dick Low, K0JYB, at 7:30 p.m. on October 2nd.

The reading of the September 4th meeting's minutes were read and approved.

Arby Boomer, WF9T, presented his treasurer's report, and it was also accepted.

Van Elston, WA9FIO, presented his repeater committee report, and said that besides his extra busy schedule this last month, we had 2 1/2 weather watches, so he delayed the down time for a while. He thought the projects could be started this next Sunday.

Walter Altus, WD9GCR, updated us on the progress being made for the Nov. 11 swap meet. We've got 4 businesses taking advantage of this meeting, and mailouts and handouts have been distributed to various locations.

Dick announced that Larry Kapp, WT9M, was arranging the test night for Nov. 3rd at 3:00 p.m. here at the Onalaska Civic Center. Walkins will be welcome, and tentative plans are being made to have testing at least 4 times per year.

More talk was had on the challenge being made for the *Smoke Signals* computer project, and the letter Charlie had redone was presented; we

noted it hadn't been mailed out yet. Scott Neader, KA9FOX/AE, moved this should be done in honor of Al Reinholz, N9FZE. Karl Olberg, W4ST, seconded this, and all were in favor.

Dick brought up the "News Line" subject Walt has been putting on '97 at 9:30 Sunday evenings, and suggested the club reimburse Walter for some of his landline expenses.

Walt moved that we make a \$25 donation to these "News Line" people for their expense. Jim Wiskow, KE9BC, seconded, and the motion passed.

Dick appointed Rick Williams, KV9U, to head up a new committee to help expedite communications between club members, and ultimately have a smoother running meeting. A potential name or two was given for Rick's discretion, like "Good Operators' Committee" or "A-1 Ops", etc. Please address your questions on operating practices, grievances, etc. to Rick and/or the persons he chooses to work with him.

Bill presented a few ideas of how we could use the 11 meter band to teach radio theory, etc., and recruit new blood into our hobby. He requested that we all at least think about the possibilities, and Dick asked him if he'd look further into the subject for the club.

Dick presented a letter from Ray Wakeen, WA9HHM, requesting our removing his call letters from the repeater for for several reasons. Rick moved to have the executive committee study this and present to the club their findings and make the necessary changes. Charlie seconded this motion, and it passed.

John Jorenby, KA9ETH, announced an Army MARS meeting this next Sunday at Ft. McCoy, Bldg. 101, from 9 a.m. to 3 p.m.

Charlie asked for input to his nominating committee for officers next year.

The meeting adjourned at 8:29.

Respectfully submitted by
Bill Wood, KE9XQ,
Secretary, R.A.R.C.

Attendance

Karl L. Olberg	W4ST
Charlie Burch	KA9UUK
Wid N. Johnson	W9DM
Maty Johnson	XYL/W9DM
Joe Mazera	WA9SOQ
Tom Gromacki	KB9BIS
Arby Boomer	WF9T
John Jorenby	KA9ETH
Gary Webb	NI9V
Scott Neader	KA9FOX/AE
Ernie Gershon	K9ZVU
Rick Williams	KV9U
Jack Yoshizumi	W9KTD
Van Elston	WA9FIO
Walter Altus	WD9GCR
Dick Low	K0JYB
Bill Wood	KE9XQ
Art Osborn	W0JDC
Mike McAlister	WD9DLM
Jim Wiskow	KE9BC

BSSS Editor's Note: We apologize for the lack of a "/" in the number zero. I'm using a borrowed computer, and I haven't figured out how to put the diagonal bar through the zeros (zeroes?). Please see my column elsewhere in this issue. Thanks!

Eau Claire Amateur Radio Club

Carl Searing, W9NW
Secretary
1129 McKinley Road
Eau Claire, WI. 54703

Meeting of October 9, 1990

The meeting opened at 7:35 p.m., Bill Jablonske, W9NNS, presiding. The secretary read the minutes of the September meeting. There was no treasurer's report.

The matter of the tower available to the club was discussed. This is evidently in worse shape than was thought previously. Further research and discussion will be done.

The 31/91 repeater evidently has a loose joint at the top of the WEAU tower, near the base of the antenna, noticeable during a wind of some strength. The station will have to be contacted, and the next visit of the tower crew ascertained.

W9NNS spoke on local packet matters, commenting that the Baldwin node is now operational, and is a useful link to the Twin Cities.

Carpeting has been obtained for the club trailer, and is awaiting installation.

Phone patch protocol and procedures were discussed.

The next meeting will be on November 13, 1990. Lunch committee: W9FYI, W9MEO, and W9ZZI.

Respectfully submitted:
W9NW, Secretary

Communications for a recent bicycle race were handled by Eau Claire Amateur Radio Club members, with Bert, W9ZZI, as net control station. Course communicators included Jerry, NG9A; Joe, N9GJU; Al, N9ISN; Mike, N9JMA; Fred, KC9NN (and Noline); and Randy, KA0ROS.

All concerned were warmly commended by the race sponsors. □

Communications Act Changes

The FCC Authorization Act (signed Oct. 1) includes several items of interest. Work begun by Senator Barry Goldwater, K7UGA (and others), before he retired has now been completed, with the changing of the Communications Act of 1934 to include a prohibition against willful or malicious interference. The new Section 333 reads: "No person shall willfully or maliciously interfere with or cause interference to any radiocommunications of any station licensed or authorized by or under this Act or operated by the United States Government." (Until now, such transgressions were violations of FCC rules, rather than of Federal statutes.) [This should greatly increase assessable fines and prison terms for violators. - K9ZZ]

Another change to the Communications Act may eventually affect reciprocal licensing between some countries in the Western Hemisphere, by permitting U.S. participation in the Lima Convention, signed by the United States and nine other countries on August 14, 1987. Other countries, including Mexico, have since agreed to that accord.

- Excerpted from *The ARRL Letter*, 10/5/90

BSSS Subscription Rates to Increase

Due to production and mailing costs beyond our control, BSSS rates will increase as shown in the schedule below. We have kept the increase as small as possible. Please also see the editor's column on page 11.

Badger State Smoke Signals

Individual Subscription Rates

Effective January 1, 1991

1 year	\$9.75	
2 years	\$18.00	Save \$1.50
3 years	\$26.00	Save \$3.25

Club Rates

Effective April 1, 1991

Subscribing members of club only:

10 or more subscriptions:
\$7.00 each per year

50 or more subscriptions:
\$6.40 each per year

All members of club (billed quarterly):

Less than 50 members:
\$6.40 per member per year

50 or more members:
\$5.80 per member per year

These rates must include all members of the club to qualify. Up to 15% additional complimentary mailings can be included at no extra cost. These are useful for political/community leaders and/or prospective members. For more information, contact BSSS Chairman Ken Ebner, K9EN, 822 Wauona Tr., Portage, WI 53901, (608) 742-3560.

Racine Megacycle Club

(Continued from page 13)

Oct., and he is looking for more participants. Anyone is welcome, be they hams or just interested parties.

Dave also reported that the first Novice class was held, and there is still room for more students.

Dave is also looking for more members willing to take NCS for the Wednesday net.

The Red Cross is holding a First Aid course for anyone interested, if they get enough participants. The cost is \$26.

Plans for our next meeting have not been finalized at the time this is written. The December meeting will start at WA0PFV's home at 6 p.m. for a pot luck lunch. At 7 p.m., we will then go through Jim's back yard to Wustum Art Museum for the meeting, coffee, and a tour of the watercolor show.

The goodie box was raffled off, and Dave Voss, WB9USI, received the honor of rearranging it.

Dave thanked those who took part in the last emergency test. There are to be more tests in the future. Future tests may be a different type.

Meeting closed at 8:39 p.m., followed by the

club auction. □

More Info on December Meeting

As noted above, the December meeting, on the 10th, will start with a potluck dinner at Rev. Jim McChesney's (WA0PFV) home at 1590 Street. Then, by the museum's invitation, we will enjoy a guided tour of the Wustum Museum, 2519 Northwestern Avenue, which will be featuring a watercolor show by Wisconsin artists. This is a great treat! After the tour, there will be a short RMC business meeting, with coffee provided by the museum.

Every Christmas, the American Red Cross boxes cookies at this time, and are embarrassed because our normal meeting place looks like a disaster area. They realize we work around this, but they are grateful we were able to move the meeting this month.

I am pleased the RMC staff was able to put this together for a festive change of pace we can share with our spouses or friend.

Please let me know how many are planning to attend so we can give the museum a rough head count. We can then also plan the items for the potluck dinner.

Thank you.

David C. Voss, WB9USI
President, RMC

QCWA Wisconsin Chapter 55 Meets, Elects Officers



These are the officers of the Quarter Century Wireless Association, Wisconsin Chapter 55. From left to right are Laurel Anderson, W9BTY, Vice-Chairman; Dick Scarvaci, K9CAN, Secretary; Fred Becker, W9KKM, Treasurer; Travis Baird, W9VQD, Director; Verne Teske, W9RYA, Chairman; Don Cyr, N9EAY, Director; and Bob Halbman, AJ9P, Director.

- Photo courtesy Ed Seruga/KE9JJ

Klemmer's Williamsburg Inn, in Greenfield, Wisconsin, was the site of the October 6 fall meeting of Chapter 55.

New officers elected at the meeting are:
Verne Teske, W9RYA, Chairman

Laurel Anderson, W9BTY, Vice-Chairman
Dick Scarvaci, K9CAN, Secretary
Fred Becker, W9KKM, Treasurer

Please turn to page 18

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Box 50062-SS, Provo, UT 84605

TAYLOR COUNTY AREA AMATEUR RADIO CLUB

Rolland Walty, W9LEE
Secretary
W. 4117 Hwy. 102
Westboro, WI 54490

Minutes of September 13 Meeting

Meeting was called to order at 7:21 p.m. by President N9GEN. Present were W9QHI, KB9BLV, N9GEN, N9GHZ, WD9FWP, and W9LEE.

Minutes of the August meeting were read and approved. Treasurer's report was given and approved.

There was a discussion of the problems experienced by the N9GHZ digipeater, which is under the club's sponsorship. N9GHZ expects to have to replace the receiver in the unit, since the traps and filters tried on the digipeater had little effect.

It was decided to try a power line filter on the W9QHI repeater in an effort to reduce the "Polish Razzberry" interference.

There being no further business, the meeting was adjourned at 7:58 p.m.

Rolland Walty, W9LEE, Secretary

Minutes of October 11 Meeting

Meeting was called to order at 7:15 p.m. by

Rolland Walty, W9LEE, Secretary

President N9GEN. Members present were KB9BLV, N9GEN, N9GHZ, KA9UXN, WD9ASX, WD9FWP, KA9WDX, and W9LEE.

Minutes of September meeting were read and approved. Treasurer's report indicating no change from last month was approved. There was a discussion of the advisability of joining the Wisconsin Association of Repeaters. It was decided to postpone a decision until members not present could be contacted.

There being no further business, the meeting was adjourned at 7:34 p.m.

Following the meeting, a videotape of early Medford history was shown to the members, thanks to WD9ASX, who loaned the tape.

Northern Wisconsin Radio Club

—Since 1923—

Steve Kraft, KE9RW
Secretary
Rt. 7, Box 62
Menomonie, WI. 54751

The September meeting of the NWRC was called to order at 7:30 p.m. on 9/25 in Room 247 of the Menomonie High School. Secretary Steve, KE9RW, read the minutes of the April meeting. President Steve, KA9OMC, gave the treasurer's report; the old balance was \$52. Money taken in for dues and subscriptions totaled \$45.

Ron, WB9WKO, thanked everyone who helped at the Boyceville Air Show, and Jim, NX9F, thanked everyone who helped at the Tinman Triathlon. They were both well organized.

The NWRC received a thank-you from the Roy Bushland family for the sympathy card.

President Steve, KA9OMC, passed a booklet around describing Special Service Clubs.

Club dues of \$5 for 1991 are due now. *Badger State Smoke Signals* is due when the renewal notice arrives in the mail; it must be processed through the club secretary.

Ernie, W0LUI, brought a letter from Clyde Richelieu, W9JS, the only remaining charter

member of the NWRC.

The fall edition of the *Wisconsin Bluebird*, featuring a picture of Ernie, W0LUI, and Delores, was passed around.

A *Who's Who in the NWRC* book with photos and stories would make a great club fund-raiser. But, someone has to start that project. Any volunteers? We discussed writing a short history and description of the NWRC for distribution to new members.

We need volunteers for the auction in February, and a host for Field Day in June. We need a committee to organize Field Day.

Steve, KE9RW, and Bill, W9NNS, enlightened the group on the subject of packet radio. Use of bulletin boards and nodes was discussed. Local packet radio interest was increased. We extend many thanks to Father Bill, W9NNS, for coming from Chippewa Falls and speaking; to Steve, KE9RW, for his contribution; to Bill, N9HNI, and Dave, K9ZVZ, for coordinating to get a digipeater on the air; and to Ron, WB9WKO, and the Menomonie High School ARC, for the room and packet station.

Jim, NX9F, announced that there are six people in the Novice class; the classes are from 7-9 p.m. on Thursdays, concluding on November 1. He also announced that on October 11, the class will meet at Steve, KE9RW's, place for a demonstration of digital modes, and that Joyce Peterson has passed her Novice written test.

Kenny, KE9CS, invited us to an Open House at the Wisconsin Public Broadcasting Regional Center on Sunday, Sept. 30.

The 4th annual bonfire, at the home of Ron, WB9WKO, and Mary, KA9WZP, will be held on Oct. 13, beginning at 4 p.m. Bring a dish to pass.

Jim, NX9F, announced that volunteers are needed for the CROP Walk on Oct. 14. An Emergency Drill Day will occur in October.

We are an ARRL-affiliated club; please renew your ARRL membership through us. Contact an officer.

We welcomed Jim, KA9ZAJ, Sarah, Ed, N8MMC, Doris, WU8I, Jones, N9CRO, and everyone else to the meeting.

The next meeting of the NWRC will be on Tuesday, Oct. 23, at 7:30 p.m., in the back room of the Peppermill in the Thunderbird Mall in Menomonie. Jim, W9VAJ, from the Wisconsin State Patrol, will tell us about the patrol's high-tech repeater system. Officers for 1991 will be elected.

The November meeting of the NWRC will be at the WHWC transmitter and tower site near Wheeler at 7:30 p.m. on November 27, Steve, NX9Z, will give us a tour of the facilities. If you need directions, contact a club officer or call on 146.61. The meeting was adjourned at 9:30 p.m.

Steve Kraft, KE9RW, Secretary

SAREX Not Cluster Buster

Continued from page 8

commentary in the past, but little in the way of actual computational facts. Another factor neglected by many SAREX reports is that there are five satellite uplink frequencies available. The 144.950 MHz frequency is a starting place. However, if QRM is a problem on the receiving end in the shuttle, there will be a change to 144.910, 144.930, 144.970, or 144.990 MHz. This fact seems to be frequently overlooked. As far as 144.950 MHz being the busiest frequency in the United States, as has been previously stated in the past, one only needs to turn on a receiver for 30 minutes to find

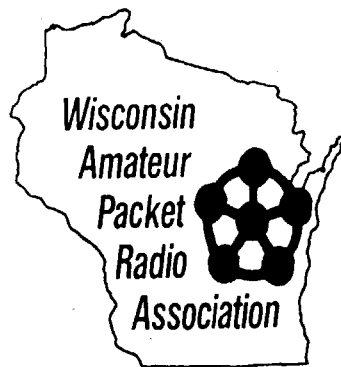
out if this is true.

Enough said. I hope that you will reformulate your opinion of the packet cluster and shuttle potential interference problem, now that all of the

facts have been presented. Is the upcoming shuttle mission a "Cluster Buster", or is the concern just "Buster Babble"?

Tom Wrench, N9HR
Wisconsin AMSAT Area Coordinator

QTH	North Latitude	Minutes in View	Highest Elevation	Max. Duration of a Pass
Minneapolis, MN	45	70	2 Deg.	5 Min.
Milwaukee, WI	43	127	5 Deg.	7 Min.
Omaha, NE	41	181	8 Deg.	8 Min.
Memphis, TN	35	331	22 Deg.	10 Min.
Orlando, FL	28	453	84 Deg.	11 Min.



THE WISCONSIN PACKETEER

Wisconsin Amateur Packet Radio Association (WAPR)

c/o Carl Schumacher, N9BYS

7740 Evergreen Terrace, Burlington, WI 53106

Steve Loeffler, WB9ZRE, Editor, 123 W. Oshkosh St., Ripon, WI 54971

WAPR Conference - November 10

A WAPR Networking conference has been scheduled for November 10, 1990 at the Holiday Inn, Stevens Point, WI to begin at 5 p.m. All interested people are invited to attend. The purpose of this conference will be to establish a organized plan for future network planning for the entire state. If you wish to present information or express your opinions on networking in Wisconsin, plan to attend this conference!

The meeting will include: Networking & recent LAN development - where and on what frequencies. Status of 145.01 forwarding - should .01 switch to 4800 baud? Backbones and links - Who and how, should keyboard connects be limited to 145.03 with no connects on 145.01?

Plan to attend. Send your R.S.V.P. to WB9TYT.

Chairman's Report.....

W.A.P.R. is trying to win you over. So we are making some newsworthy efforts to move Packet Radio ahead.

Meteor Hills was the place where it was "happening" in the last days of September. On Sunday, September 23, Chris - KA9UQO and Jeff - N9JMB went to Meteor Hill near Exeland to hang a new G6 Hustler antenna for the W9NNS-1:WINNS node at 1865 feet MSL. The transceiver was donated by Gale Sorum - WD9HFT, the amplifier and power supply by Bill Jablonske - W9NNS and we had a lot of help from Tom Young - KD9FC who sponsors the Hayward node. The TNC was moved from Eau Claire's converse node for this test installation. All this has allowed WAPR to test a node site that links ALL of the cities in the top half of Wisconsin. By the way, the antenna and feed line were paid for by monies from WAPR dues. (This is the commercial: if we had more members, we could fund more nodes!...and if we had more volunteers we could get more done right now!)

But you may have already noticed what this node can do. It directly communicates with Wausau, Stevens Point, Duluth, Bayfield, Park Falls, Spooner, Eau Claire, Chippewa Falls, Hayward and Medford. Under enhanced conditions it also talks to Minneapolis, Saint Cloud, North Freedom, Rochester, Faribault, Antigo, and Houghton MI.

This site is "extraordinary" in every sense, and will become the base point for the high speed link from Milwaukee to all of northern Wisconsin.

All this success is temporary right now. We will need to find permanent equipment for two sites. We also need people who would be willing

to form a team to help at other sites VERY SOON.

And we have more good news: Bob - W9BUG and Frank - W9AVX put the Baldwin node (WIBALD) into operation at its permanent site. With this node, all of the nodes seen at Eau Claire, La Crosse, and Exeland (Meteor Hill) have a dependable path to the Twin Cities. In one week of their operation W9NNS:(WICFBB) bulletin board picked up 16 new users.

All this movement of course brings with it some problems. Kent - W9LZQ in La Crosse sent me a message raising the question of over-crowding of 145.01 which means frames crashing and bulletin boards that cannot download because there is just too much stuff flying! If you listen to the channel you know that he is right. So then how can we solve this one? I will try to present some opening thoughts from the old timers who are planning solutions....in next months letter.

Our momentum is good. You could keep it moving. WE NEED CLIMBERS right now. PLEASE call me today!!

Bill Jablonske - W9NNS, WAPR Chairman
810 Pearl St., Chippewa Falls, WI 54729
(715)-723-4088

Central Wisconsin Changes Made.....KD9NV

The following changes were made on KD9NV BBS as of Oct 13, 1990 at 08:00 CDT. These changes are being made per the State Band Plan and WAPR/WAR frequency coordination. Hopefully this will be the last frequency change in this area.

1. WAPR/WAR has allocated 145.630 as the LAN frequency for Central Wisconsin. This includes Wood, Portage, and Marathon counties. Therefore my BBS port on 145.690 has been switched to 145.630.
2. WAPR/WAR band plan suggests the use of 145.010 for the forwarding of traffic ONLY, and that users do NOT use this frequency to access BBS Systems of any type. Therefore my BBS port on 145.010 will be changed to not allow users access to this port. This change will not be made immediately in order to allow people time to obtain crystals, if necessary. This change will go into effect Oct 31, 1990.
3. It is suggested that all who wish to leave their Personal Mailboxes on NOT use 145.010 (see # 2 above). These systems should also move to 145.630. The LAN frequency of 145.630 should be used for all BBS type activities in this area.

4. It is suggested, in the WAPR/WAR Band Plan, that NO keyboard to keyboard QSO's be done on 145.010. The frequency of 145.030 should be used for this type of communication and all non-BBS type activities in this area.

Summary of WAPR/WAR Band Plan:

- A. All BBS type activity use 145.630, including Personal BBS's.
- B. All Keyboard to keyboard communications to be on 145.030.
- C. 145.010 NOT to be used to access any type of BBS System.
- D. 145.010 NOT to be used for keyboard to keyboard QSO's.
- E. All users are requested NOT to use 145.010 for any type of local communications.

Lets all support this Band Plan and frequency coordination. It will make packet radio communications a lot more effective in this area, and around the state. Remember when voice repeaters just started operating anywhere before WAR and frequency coordination of them. Some of the changes were not popular, but in time proved to be the best for all concerned and the most effective use of the frequencies.

GFARC Fills BBS Void in East-Central Wisconsin

It became apparent at the beginning of this year, that the Green Lake LAN (144.97) had to establish a full-function BBS in order to support the increasing growth of packet within the area and provide an incentive for continued growth. LAN users, at that time, had to access KC9BK BBS in Brown Deer - 90 miles and 4 nodes away, to send and receive messages from "the outside world"! A proposal was submitted by Bruce - W9LCK to set up a BBS for the LAN in April and a committee was appointed to research the systems and the costs involved. Several options were entertained, and a decision was reached that the BBS should be owned by the club in order that club membership could set policy regarding BBS operations. The computer BBS committee reported back to the club in May and it was agreed that the club could not entirely fund the project and a fund raiser would have to raise additional funds to make the proposal a reality. Wally - KC9WQ volunteered to chair the fund raising

committee resulting in substantial donations from non-club and club members alike. Mac - N9CXX ran a separate mini-fundraiser by selling baseball caps imprinted with the club logo to club members.

Due to the response of the donors, the club BBS computer became a reality on September 18 with 24 hour service starting on September 22.

The computer is a DTK TECH-1630 16MHz 80286 with 1 meg RAM, 1.2 floppy, 65 meg hard drive, 2 serial /1 parallel ports, 101 keyboard and 12 amber monitor. It is running the MSYS 1.09 BBS software and is configured for auto and reverse mail forwarding to user's personal bulletin boards for those requesting the option.

Response to the BBS has been fantastic, with more than 35 packeteers using the system. It is encouraging to hear an increased interest in packet voiced by the non-packet Amateur community.

Programs are being planned for club meetings in order to help uninformed, new, struggling and the advanced user utilize the BBS to its fullest. The Download database is constantly being updated.

The GFARC BBS (WB9ZRE) is accessible thru the Green Lake Node (WIGLK) and serves Waushara, Marquette, Green Lake, Fond du Lac, Winnebago, northern Dodge and southern Waupaca counties.

Editorial by WB9ZRE.....
HAM "SLAMMING"

Packet radio continues experiencing "growing pains", and the latest pain, I'll call "slamming", is unfortunately gaining momentum. Slamming, is defined as sending derogatory, inflammatory messages to other amateurs who have violated the slammer's interpretation or illusion of Part 97, operating procedure, or how the packet network "should be run". Variations of "slammers" include "Packet Police", "5-Watt Lawyers" and originators of "Flame On" messages.

The slammer usually sends a message to the unwary amateur, taking great pleasure in describing the "offense" and questioning the amateur's intelligence. This may be taken to extremes, with the slammer posting a general bulletin throughout the United States - even the world, describing the "violation".

The truth about these individuals is, that they are rarely correct in their argument or solution. Their only contribution to the packet community is in inciting ill-will and adding to the overhead of truly useless messages that pass thru the system. This we can all do without.

As SYSOP for the GFARC BBS, I read every message that goes thru that system on a daily basis and I am disgusted by the profusion of these "slam" messages. These nuisance messages became a problem a couple of weeks ago when two messages originated on the GFARC system were, due to an unusual program bug in the BBS, improperly rerouted to @ALLUSA and forwarded to virtually every BBS in the United States. The result you will be happy to hear was a deluge of slam mail to the two innocent individuals posting the messages. (The bug was identified just prior to the first slam message arriving on the BBS). The messages were so bad that one of the two fellows was questioning whether he shouldn't just pull the plug on the TNC and quit packet altogether!

Granted, the Amateur Radio Service is largely

a self-policing entity, but who elected these ignorant loudmouths to the position? I always thought that the FCC enforced the laws and that there's an (almost) ample supply of ARRL Official Observers out there to help identify possible problems.

Amateur Radio packet, like all other modes of Amateur Radio is a continually developing technology in which beginner and expert users learn thru experience - including making an occasional error. As such, IT IS NOT AND NEVER WILL BE A PERFECT "TURNKEY" SYSTEM! That's part of the enjoyment and challenge of Amateur Radio. If you don't believe it, then turn off your rig and do your communicating on the telephone.

If you should be on the receiving side of "slam" mail, under no circumstances respond to the originator, as it will give him satisfaction that he has harassed you. Treat it like any other form of trash, delete it and forget it. (You might let your HOME SYSOP know about the messages that you have received as he can hold and delete incoming slam mail to you).

Amateur Radio has a long history of goodwill and service that can quickly be eroded if this type of behavior should continue. This is all too familiar to the mid-70s on the 11 meter spectrum of the HF band. We know how that episode turned out. Do you want to repeat it?

Packet on Mir Space Station in January '91.....

A new and exciting amateur radio project is being planned for the Mir space station known as the "Amateur Radio Experiment on Mir" or AREM. This project is the result of a collaboration between hams in the Soviet Union and the Austrian Amateur Radio Society (OeVSV). This project is designed to provide equipment for both 2M packet data and voice transmissions from Mir. The voice messages from Mir will provide timely information to radio amateurs while being another educational tool to help school teachers start students thinking about space science. The voice messages will be spoken in German, Russian, and English. The voice beacons will alternate with packet transmissions.

The basic AREM station will consist of a 2M transceiver, a lap-top computer, a TNC-2 running at 1200 baud and using AX.25 protocol, and a voice synthesizer. A special external 2M antenna will be attached to the outside of the Mir space station for this project. The first AREM operations are expected to begin around January 1991 when an Austrian cosmonaut will install the station after he joins the crew of the Mir. After the Austrian cosmonaut finishes his mission on Mir, the equipment will remain aboard the space station. It is envisioned that an upgrade to this station will be to incorporate Bulletin Board System (BBS) software on the lap-top computer. This upgrade is not envisioned to happen until (continued on page 3)

QCWA Wisconsin Chapter 55

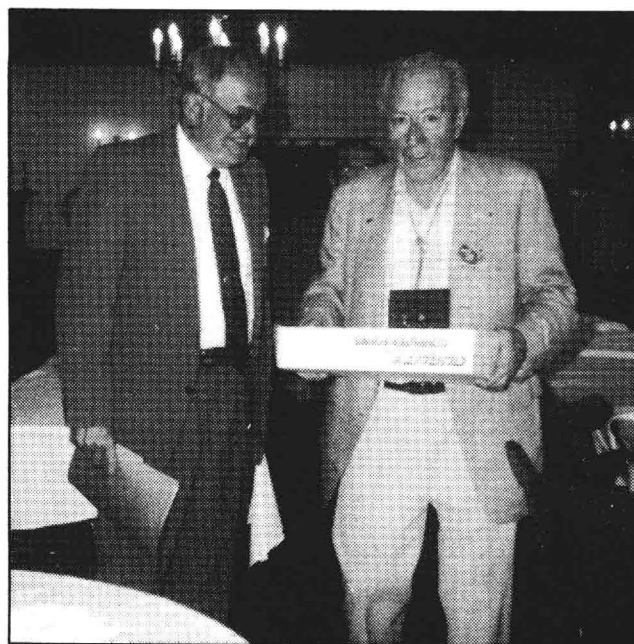
Continued from page 15

In addition, Travis Baird, W9VQD; Don Cyr, N9EAY; and Bob Halbman, AJ9P, round out the board of directors.

The dates and locations of the luncheon meetings for 1991 are:

Spring Meeting: Saturday, June 1, 1991, in Lake Delton, and

Fall Meeting: Saturday, October 5, 1991, in



Looking over auction treasures are Chapter 55 Chairman-Elect Verne Teske, W9RYA (left), and Fred Linn, W9NZF.

Door County.

Door prizes were given out, with much gusto being displayed by the winners.

A lively auction of treasures, "M-Ceed" by the chief auctioneer, Travis Baird, W9VQD, was enjoyed by all.

Many of the ladies in attendance opted for a tour of the Boerner Botanical Gardens at Whitnall Park. Reports upon their return indicated that the display of the fall flowers and plantings are very nice and highly impressive.

- Story and photos by Ed Seruga, KE9JJ
Wisconsin Chapter 55, QCWA



Enjoying the day's festivities are Al Krones, K9AA (left), and Jack Krause, W9JK.

Yellow Thunder Amateur Radio Club



K90DK
WB9FDZ

Art Kleefisch, W9WSS
Secretary
1014 5th Street
Baraboo, WI. 53913

The YTARC meets in the Baraboo Civic Center at 7:30 p.m. in the scheduled room.

Wednesday, November 14	Room 14
Thursday, December 13	Room 14
Tuesday, January 15	Room --

Minutes of YTARC October 16 Meeting

The meeting was called to order at 7:55 p.m. by President Duane Grotophorst. The following members were present:

Duane Grotophorst, KA9HKL	Loganville
Jim Decker, WB9UQT	Baraboo
Harry Mayland, K9FFT	Baraboo
Harry Westlund, K9EHJ	Baraboo
Harold Reif, KA9YQP	Baraboo
Ken Johnson, K9DZG	Mazomanie
Steve Schwoegler, WB9RNL	Wis. Dells
Art Kleefisch, W9WSS	Baraboo

The minutes of the August meeting were accepted as published in BSSS.

The treasurer's report was given and accepted.

Duane, KA9HKL, brought up the topic of upgrading classes for discussion. After a lengthy discussion, it was decided that no classes would be held, due to lack of interest or commitment at this time.

It was decided to plan on Novice classes to start in January or February of next year.

Ken, K9EN, was picked for Buck-Nite. Ken was not present to collect.

Art Kleefisch, Secretary

YTARC Birthdaze

Orv Warning, W9OXN	November 14
Gary Pratt, WB9ECO	November 17
James Taylor, WA9GJV	November 21

Radiosporting Federation Being Formed: Bob Cox, K3EST, and other influential contest operators are playing a pivotal role in the creation of the World RadioSporting Federation. Cox and the others hope to use the federation as a stepping stone to getting Amateur Radio considered for inclusion as an official Olympic "demonstration sport," beginning with the 1996 Olympic games. K3EST was one of the key people in the organization of the 1990 World RadioSport Team Championship, held in conjunction with the 1990 Goodwill Games in Seattle last July.

- Westlink Report, 10/12/90

Riverland Amateur Radio Club FIRST ANNUAL *RARC Hamfest and Shopping Spree*

La Crosse Valley View Mall

Sunday, November 11, 1990

8 a.m. 'til 4 p.m.

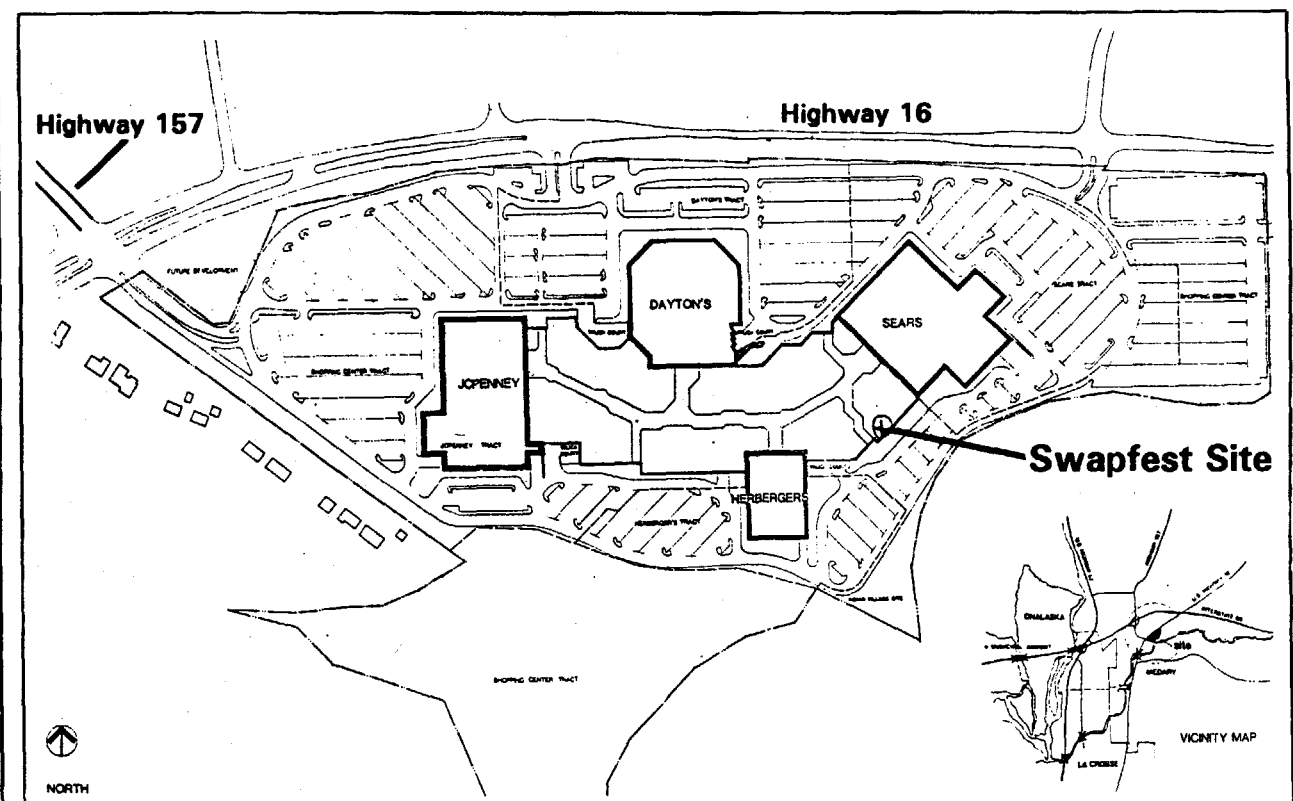
Open to all Hams and Friends

Cost: Individual Admission - \$1.00

Tables: \$2.00 Table Rent for Sales

The Mall will be open at 7:00 a.m. for setup. Loading door is between Entrance #3 and Sears. The location is shown on the map.

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Valley View Mall is at the intersection of Highways 16 and 157, just south of I-90 interchange #4. There is abundant parking available.

Riverland ARC, W6539 Birch St., Onalaska, WI 54650

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